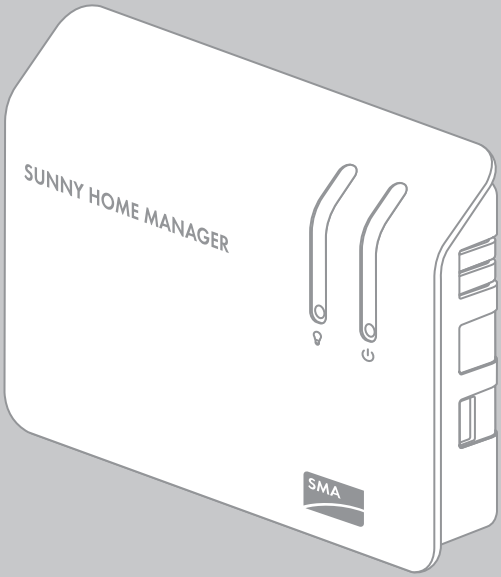
Device for PV Plant Monitoring and Load Control

SUNNY HOME MANAGER in Sunny Portal

User Manual



HoMan_Portal-BA-en-11 | Version 1.1

EN

Table of Content

1 Information on this Document 105

2 Safety 107

2.1 Intended Use 107

2.2 Safety Precautions 109

3 Product Description 110

3.1 Sunny Home Manager 110

3.2 SMA Radio-Controlled Socket 114

3.3 Sunny Portal 115

4 Getting Started 116

4.1 Registering the Sunny Home Manager in the Sunny Portal 116

4.2 Logging In and Out of Sunny Portal 116

4.3 Setting the Language 116

5 User Interface of the Sunny Home Manager Plant 117

6 Page and Drop-down Menu 118

6.1 Plant Selection and Plant List 118

6.2 My Sunny Home Manager Plant 119

6.2.1 Plant Profile 119

6.2.2 Current Status and Forecast 119

6.2.3 "Energy Balance" 122

6.2.4 "Load Balance and Control" 124

6.2.5 "Energy and Power" 126

6.2.6 "Annual Comparison" 127

6.2.7 "Plant Monitoring" 127

6.2.8 "System Logbook" 129

6.3 "Performance Ratio" 130

6.4 "Report" 130

6.4.1 "Daily Plant Report" 130

6.4.2 "Monthly Plant Report" 130

6.5 "Devices" 130

6.6 "Sensors" 130
6.7 "Configuration" 131
6.7.1 "Plant Properties" 131
6.7.2 "System Presentation" Page 131
6.7.3 "Device Overview" Page 132
6.7.4 "Report Configuration" 133
6.7.5 "User Management" 133
6.8 "User Info/Logout" 134
6.8.1 "User Information" 134
6.8.2 "Logout" 134
7 Page Settings 135
7.1 Configuring Settings In Diagrams 135
7.1.1 Setting the Display Period 135
7.1.2 Saving Diagram Data 135
7.1.3 Printing Diagram Data 136
7.1.4 Enlarging the View 136
7.1.5 Showing and Hiding Legends 136
7.2 Sorting the Plant List 136
7.3 Showing and Hiding SMA Radio-Controlled Sockets 136
7.4 Publishing Pages 137
7.4.1 Releasing Pages for Viewing in Sunny Portal 137
7.4.2 Presenting Sunny Portal Pages on the Internet 138
8 Device Settings 139
8.1 Filtering the "Device Overview" Page 139
8.2 Calling Up the Properties of a Device 139
8.3 Calling Up the Device Parameters 140
8.4 Updating Parameters 140
8.5 Ascertaining the Software Package Version 141
8.6 Configuring the Energy Meter 141
8.7 Setting the Data Request Interval 142
8.8 Activating/Deactivating Automatic Software Updates 143

8.9 Entering the Line Conductor 144
8.10 Entering the Generator Capacity 145
8.11 Changing the Device Name 146
8.12 Changing a Device Description 146

9 Load Control 147
9.1 Safety when Configuring SMA Radio-controlled Sockets 147
9.2 Configuring SMA Radio-Controlled Sockets 148
9.2.1 Requirements 148
9.2.2 Procedure 148
9.2.3 Activating/Deactivating Data Collection 148
9.2.4 Selecting the Load Types 149
9.2.5 Entering the Load Name 150
9.2.6 Entering the Power Consumption 150
9.2.7 Enter the Maximum Program Operating Time 150
9.2.8 Entering the Minimum Switch-On Time 151
9.2.9 Entering the Minimum Switch-Off Time 151
9.2.10 Configuring the Time Period 152
9.3 Setting the Operating Mode of the SMA Radio-Controlled Socket . . 154
9.4 Controlling the Loads using SMA Radio-controlled Sockets 155
9.4.1 Controlling "Program-controlled" Loads 155
9.4.2 Controlling "Not Program-controlled" Loads 156
9.5 Load Control via the Miele@home System 156
9.5.1 The Miele@home System and SG-Ready 156
9.5.2 Activating/Deactivating Miele@home Support for the Sunny Home Manager 157

10 Plant Management 158
10.1 Adding Devices to the Plant/Replacing Devices 158
10.2 Activating/Deactivating Devices 159
10.3 Replacing the Sunny Home Manager 160
10.4 Reassigning the Sunny Home Manager After Resetting the Sunny Home Manager Plant 161
10.5 Deleting a Device from the Sunny Portal 162

10.6 Deleting the Sunny Home Manager Plant 162

11 Plant Monitoring 163

11.1 Plant Monitoring Options 163

11.2 System Logbook 163

11.2.1 Calling up and Filtering Messages 163

11.2.2 Confirming Messages 164

11.3 Reports 165

11.3.1 Report Overview 165

11.3.2 Configuring Reports 165

11.3.3 Creating a Report for a Specific Date 167

11.4 Setting Communication Monitoring 168

11.5 Setting the Inverter Comparison 169

12 Plant Settings 170

12.1 Entering the String Properties 170

12.2 Changing Plant Data 171

12.3 Changing the Plant Name 172

12.4 Setting the Plant Power 172

12.4.1 Manually Entering the Plant Power 172

12.4.2 Calculating the Plant Power 173

12.5 Changing the Plant Description 174

12.6 Changing Operator Data 174

12.7 Changing/Deleting the Plant Image 175

12.8 Feed-In Compensation, Self-Consumption Tariff and Electricity Tariff . . 177

12.9 Configuring the Limiting of the Active Power Feed-In 178

12.10 Setting the Optimization Target 179

12.11 Entering the Value of CO_2 Savings 180

12.12 Calculating the Predicted Annual Yield 180

12.13 Setting the Monthly Distribution of the Predicted Annual Yield . . . 181

12.14 Editing your Data Releases 182

13 User Management 183
13.1 Users and User Rights 183
13.2 Creating a New User 184
13.3 Deleting a User 184
13.4 Changing User Rights 185
13.5 Changing User Information 185
14 Password Information 186
14.1 Selecting Secure Passwords 186
14.2 Required Passwords 186
14.2.1 Sunny Portal Password 186
14.2.2 Plant Password 186
14.3 Changing Passwords 187
14.3.1 Changing the Sunny Portal Password 187
14.3.2 Changing the Plant Password 187
14.4 Lost Password 188
14.4.1 Forgotten Sunny Portal password 188
14.4.2 Forgotten Password 188
15 Troubleshooting 189
16 Contact 201

1 Information on this Document

Validity

This document is valid for the following products:

- HM-BT-10.GR2 from software package 1.03.0.R
- BT-SOCKET-10 from software package 12.12.100.R
- Sunny Portal

Target Group

This document is intended for end users.

Additional Information

Links to additional information can be found at www.SMA-Solar.com:

Document title	Document type
Sunny Home Manager	Installation manual
Performance ratio – Quality factor for the PV plant	Technical information

Symbols

Symbol	Explanation
⚠ DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury
⚠ WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury
⚠ CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury
NOTICE	Indicates a situation which, if not avoided, can result in property damage.
i	Information that is important for a specific topic or objective, but is not safety-relevant
☐	Indicates a requirement for meeting a specific goal
☑	Desired result
✖	A problem that could occur

Typography

Typography	Usage	Example
"Light"	• Display messages on the inverter • Elements of a user interface • Connections	• The value can be read off in the "Energy" field.
bold	• Elements to be selected	• Enter **10** in the "Minutes" field.
>	• Several elements to be selected	• Select **Settings > Date**.
[Button/Key]	• Button or key to be selected or pressed	• Select [Next].

Nomenclature

Full Designation	Short Form in this Manual
SMA radio-controlled socket with *Bluetooth*® Wireless Technology	SMA radio-controlled socket
SMA *Bluetooth*® Piggy-Back, SMA *Bluetooth*® Piggy-Back Plus	SMA *Bluetooth* Piggy-Back
SMA *Bluetooth*® Wireless Technology	*Bluetooth*

Abbreviations

Abbreviation	Designation	Explanation
AC	Alternating Current	–
DC	Direct Current	–
PV	Photovoltaics	–
SSL	Secure Sockets Layer	Protocol for transmitting coded data via the internet
URL	Uniform Resource Locator	–

2 Safety

2.1 Intended Use

Sunny Home Manager

The Sunny Home Manager is a device for monitoring PV plants and for controlling loads in households with PV plants. For this purpose, the Sunny Home Manager performs the following tasks:

- Reading out energy meter data and data from SMA inverters with *Bluetooth* devices
- Sending data to the Sunny Portal
- Support in increasing the self-consumption rate
- Limiting of the Active Power Feed-in

The Sunny Home Manager is not splash-proof.

- Only use the Sunny Home Manager indoors.

The Sunny Home Manager must only be used with supported devices (see Sunny Home Manager installation manual).

It is not permitted to convert the Sunny Home Manager or install components.

Only use the Sunny Home Manager in accordance with the information provided in the enclosed documentation. Any other use may result in personal injury or property damage.

The enclosed documentation is part of this product.

- Read and adhere to the documentation.
- Keep the documentation in a convenient place at all times for future reference.

SMA Radio-Controlled Socket

The SMA radio-controlled socket supports load control in households with the Sunny Home Manager. For this purpose, the SMA radio-controlled socket performs the following tasks:

- Converting control commands of Sunny Home Manager
- Measuring the energy consumption of the connected electrical loads
- Improving the wireless connection between *Bluetooth* devices

The SMA radio-controlled socket is not splash-proof.

- The SMA radio-controlled socket is only to be used indoors.

The SMA radio-controlled socket is approved for use in all EU member states.

It is not permitted to convert the SMA radio-controlled socket or install components, as the conversion or the installation of components can lead to property damage or injury.

Only use the SMA radio-controlled socket in accordance with the information provided in the enclosed documentation. Any other use may result in personal injury or property damage.

- Do not connect any medical devices to the SMA radio-controlled socket.

- Do not connect any loads to the SMA radio-controlled socket that require continuous current (e.g. refrigerator, freezer).
- Do not connect any loads to the SMA radio-controlled socket that can cause injuries or fires if switched on unintentionally and while unattended (e.g. iron).
- Only connect loads to the SMA radio-controlled socket that are suitable for the voltage and power range of the wall socket and the SMA radio-controlled socket (see the Sunny Home Manager installation manual).
- Only connect the SMA radio-controlled socket to correctly installed socket-outlets with a grounding contact.

The enclosed documentation is part of this product.

- Read and adhere to the documentation.
- Keep the documentation in a convenient place at all times for future reference.

Sunny Portal

The Sunny Portal is an Internet portal with the following functions:

- Visualizing the PV plant data and the data from the SMA radio-controlled sockets.
- User interface for configuring the Sunny Home Manager and SMA radio-controlled sockets.

The enclosed documentation is part of this product.

- Read and adhere to the documentation.
- Keep the documentation in a convenient place at all times for future reference.

2.2 Safety Precautions

Danger to Life by Connecting Medical Devices

Connecting medical devices while unattended can result in life-threatening situations.

- Do not connect any medical devices to the SMA radio-controlled socket.

Risk of Injury and Fire due to Unintentional and Unattended Switching On of Loads

Loads that are unintentionally activated via an SMA radio-controlled socket can cause injuries and fires (e.g. iron).

- Do not connect any loads to the SMA radio-controlled socket that can cause damage if switched on unintentionally and while unattended.

Damage to Loads

Frequently switching a load on and off can damage it.

- Ask the load manufacturer whether the load is suitable for control via an SMA radio-controlled socket.
- Do not connect any loads to the SMA radio-controlled socket that require continuous current.

Damage to the SMA Radio-Controlled Socket

If the SMA radio-controlled socket is not operated correctly, it could be damaged.

- Do not operate the SMA radio-controlled sockets when they are plugged into each other.

Damage to the Wall Socket

If the SMA radio-controlled socket is operated in a wall socket that is not compatible with the power of the connected load, the wall socket may be damaged.

- Only operate the SMA radio-controlled socket in wall sockets compatible with the power of the connected load.

3 Product Description

3.1 Sunny Home Manager

The Sunny Home Manager is a device for monitoring PV plants and for controlling loads in households with PV plants. For this purpose, the Sunny Home Manager performs the following tasks:

- Reading out energy meter data and data from SMA inverters with *Bluetooth* devices
- Sending data to the Sunny Portal
- Support in increasing the self-consumption rate
- Limiting of the active power feed-in

Reading out Energy Meter Data and Data from *Bluetooth* Devices

The Sunny Home Manager reads the data of the connected energy meter and *Bluetooth* devices. The Sunny Home Manager establishes the wireless connection to the *Bluetooth* devices via *Bluetooth*. The Sunny Home Manager is connected to the energy meters via cables.

Sending Data to the Sunny Portal

The Sunny Portal is the user interface of the Sunny Home Manager. The Sunny Home Manager sends the data read out to the Sunny Portal. The Sunny Home Manager establishes the connection to the Sunny Portal via a router.

Support in Increasing the Self-Consumption Rate

Self-consumption means the consumption of PV power produced at the site where you are generating power.

In every household, there is "natural" self-consumption, as electrical loads are operated while PV power is produced (e.g. oven) and because certain electrical loads continuously consume power (e.g. refrigerators, devices in standby mode). If the PV plant produces a lot of PV power, it is possible that only a part of the PV power will be self-consumed. The residual PV power is fed into the power distribution grid.

A higher self-consumption rate can be achieved if electrical loads are specifically switched on when residual PV power is available.

The following functions of the Sunny Home Manager make it possible to increase the self-consumption rate:

Function	Explanation
Creating a yield forecast*	The Sunny Home Manager receives location-based weather forecasts via the Internet and uses them to create yield forecasts for the PV plant.

Function	Explanation
Creating a load profile	The Sunny Home Manager detects how much energy is typically consumed at certain times in a household and uses this to create a load profile of the household. To create the load profile, the following energy meters must be connected to the Sunny Home Manager: • One feed-in meter and one consumption meter **or** • Bidirectional meter for grid feed-in and purchased electricity
Controlling SMA radio-controlled sockets	Specific loads connected to SMA radio-controlled sockets can be switched on and off by the Sunny Home Manager. The Sunny Home Manager uses the yield forecast and the load profile to determine favourable points in time for increasing the self-consumption rate and controls the loads.
Controlling Miele devices using the Miele@home system	The Sunny Home Manager can control Smart Grid-compatible (SG-Ready) devices from Miele & Cie. KG using a Miele@home gateway**. Smart Grid-compatible devices from Miele can be distinguished via the SG-Ready symbol. The Sunny Home Manager uses the yield forecast and the load profile to determine favourable points in time for increasing the self-consumption rate and controls the loads. The Sunny Home Manager controls the devices using the Miele@home gateway.
Sending energy meter data to Sunny Backup systems	If a *Bluetooth* Piggy-Back Off-Grid is installed in the Sunny Backup, the Sunny Home Manager can transfer the energy meter data to the Sunny Backup system. At a suitable point in time, the Sunny Backup activates the charge or electric discharge of the batteries: • If residual PV power is available, it is stored in the batteries. • If no PV power is available, the Sunny Backup activates the electric discharge of the batteries and the energy can be used.

* Data is not available in all countries.

** SG-Ready is not available in all countries.

Limiting of the Active Power Feed-In

The network operator may require a continuous limiting of the active power feed-in for your PV plant, i.e. limiting of the active power being fed in to the power distribution grid to a certain value or a percentage of the installed plant power. If necessary, contact your network operator.

The Sunny Home Manager monitors the active power being fed into the power distribution grid with the aid of a feed-in meter. If the active power feed-in exceeds the defined threshold, the Sunny Home Manager limits the PV production of the inverter via *Bluetooth*.

The Sunny Home Manager prevents yield losses as a result of unnecessarily strong limiting of the PV production by taking the current self-consumption of the household into account.
The "Increased Self-consumption" function of the Sunny Home Manager also helps to utilize residual PV power in the household.

Example: Limiting of the Active Power Feed-in to 70% of the Plant Power

The plant can currently produce 90% of the plant power thanks to good solar irradiation.

- 20% of the plant power is currently being consumed by the loads in the household. The remaining 70% of the plant power is fed into the power distribution grid.

  ☑ Limiting the PV production is not necessary.

- A load is switched off and only 10% of the plant power is still being used in the household. As a result, 80% of the plant power is available for feed-in to the power distribution grid, which is more than permitted.

  ☑ The Sunny Home Manager reduces the PV production from the theoretically possible value of 90% of the plant power to 80% of the plant power. 70% of the plant power continues to be fed into the power distribution grid.

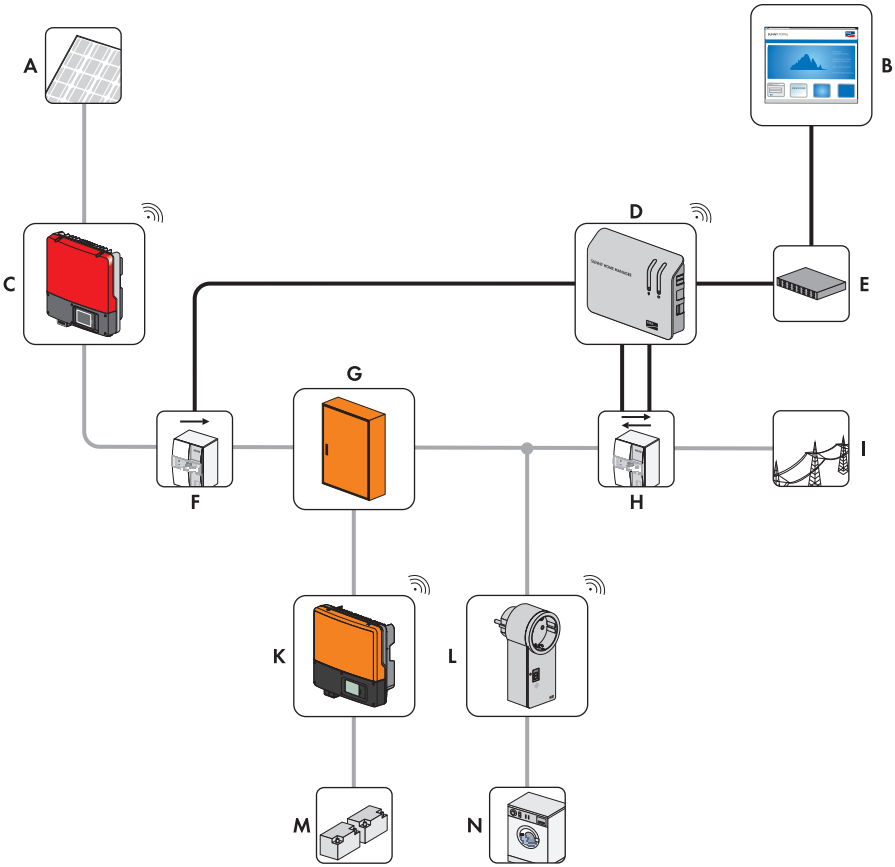


Figure 1: PV plant with Sunny Home Manager (example with Sunny Backup)

Item	Description
A	PV modules
B	Sunny Portal
C	PV inverter
D	Sunny Home Manager
E	Router
F	PV production meter
G	Automatic Switch Box

Item	Description
H	Feed-in meter and consumption meter or bidirectional meter for grid feed-in and purchased electricity
I	Electricity grid
K	Sunny Backup
L	SMA radio-controlled socket
M	Battery
N	Electrical load

3.2 SMA Radio-Controlled Socket

The SMA radio-controlled socket supports load control in households with the Sunny Home Manager. For this purpose, the SMA radio-controlled socket carries out the following tasks:

- Converting control commands of Sunny Home Manager
- Measuring the energy consumption of the connected electrical loads
- Improving the wireless connection between *Bluetooth* devices

Converting Control Commands of Sunny Home Manager

The Sunny Home Manager can switch the SMA radio-controlled socket on and off. As a result, specific electrical devices can be switched on if there is a lot of PV power available, for example.

The points in time at which the Sunny Home Manager switches the SMA radio-controlled socket on or off depend on the configuration of the SMA radio-controlled socket.

Measuring the Energy Consumption of the Connected Electrical Loads

The SMA radio-controlled socket measures the energy consumption of the connected electrical loads.

Improving the Wireless Connection between *Bluetooth* Devices

If the distance between *Bluetooth* devices is too great or obstructions interfere with the *Bluetooth* connection, the SMA radio-controlled socket can be used as a repeater. This closes the dead zone.

3.3 Sunny Portal

The Sunny Portal is an Internet portal with the following functions:

- Visualizing the PV plant data and the data from the SMA radio-controlled sockets.
- User interface for configuring the Sunny Home Manager and SMA radio-controlled sockets.

The Sunny Portal receives the PV plant data and the data from the SMA radio-controlled sockets. The Sunny Portal transmits settings made on the Sunny Home Manager and SMA radio-controlled sockets via the Sunny Portal to the Sunny Home Manager. The Sunny Home Manager transmits the settings to the SMA radio-controlled sockets.

System requirements:

☐ Internet access

☐ JavaScript must be activated in the Internet browser.

Supported Internet browsers:

- Google Chrome as of version 14.0
- Microsoft Internet Explorer as of version 8
- Mozilla Firefox as of version 5
- Opera as of version 11.0
- Safari as of version 5.0

Recommended screen resolution:

- At least 1,024 x 768 pixels

SMA devices:

- Sunny Home Manager
- Recommended: SMA radio-controlled sockets

Energy meters:

SMA Solar Technology AG recommends connecting at least the following energy meters to the Sunny Home Manager:

- One feed-in meter and one consumption meter

  or

- 1 bidirectional meter for grid feed-in and purchased electricity

For the "Limiting of the Active Power Feed-in" function, at least one feed-in meter is needed (for the requirements of the feed-in meter, see the Sunny Home Manager installation manual).

4 Getting Started

4.1 Registering the Sunny Home Manager in the Sunny Portal

You must register the Sunny Home Manager in the Sunny Portal using the plant setup wizard (see the Sunny Home Manager installation manual).

4.2 Logging In and Out of Sunny Portal

Logging into Sunny Portal

Requirements:

☐ The Sunny Home Manager is registered in the Sunny Portal (see the Sunny Home Manager installation manual).

1. Open **www.SunnyPortal.com**.
2. In the "Login" area, enter the e-mail address in the "E-mail" text field.
3. Enter the Sunny Portal password in the "Password" text field.
4. Activate the **SSL** checkbox to transmit the encrypted login data.
5. Activate the **Remain logged in** checkbox to stay logged in for your next Sunny Portal visits. This way, you remain logged into Sunny Portal until you log out using the user interface.
6. Select [Login].

Logging Out of Sunny Portal

When you log out of the Sunny Portal user interface, you protect your PV plant against unauthorized access.

- Select [Logout] in the header.

  or

- Select **User Info/Logout > Logout** in the page and drop-down menu.

4.3 Setting the Language

1. In the user interface header, move the mouse pointer onto .

   ☑ A drop-down menu opens.
2. Select the desired language.

5 User Interface of the Sunny Home Manager Plant

Accessing the User Interface of the Sunny Home Manager Plant

If you have only created one plant in Sunny Portal, you automatically access the user interface of the Sunny Home Manager plant after you log into Sunny Portal.

If you have several plants in the Sunny Portal, you must access the user interface of the Sunny Home Manager plant after you log into Sunny Portal.

1. Log into Sunny Portal (see Section 4.2).
2. Select **Plant Selection > "My Sunny Home Manager Plant"** in the page and drop-down menu.

   ☑ The user interface of the Sunny Home Manager plant opens.

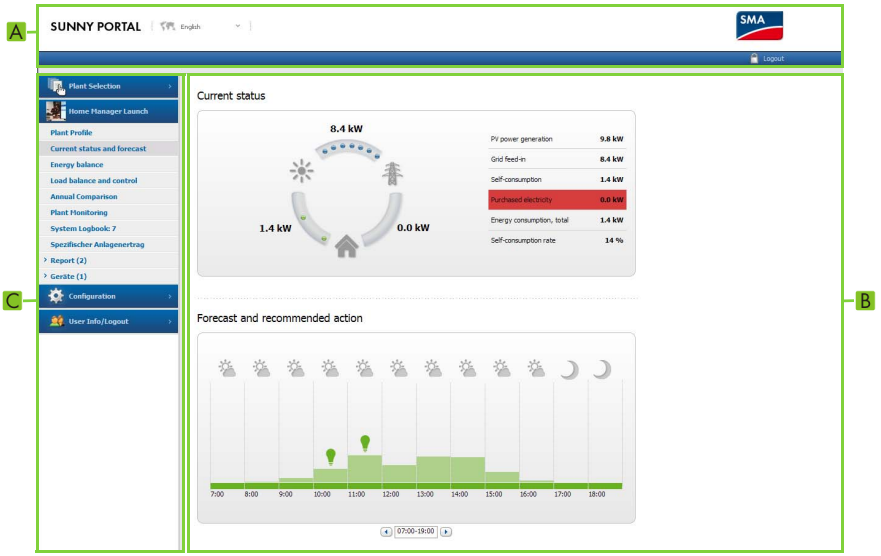


Figure 2: User interface of the Sunny Home Manager plant in Sunny Portal

Item	Description	Explanation
A	Header	• Select the user interface language • Log out of Sunny Portal
B	Content area	• Contents of the selected page
C	Page and drop-down menu	• Access to the various pages and menus of the Sunny Home Manager plant

6 Page and Drop-down Menu

6.1 Plant Selection and Plant List

The following is required to display the menu item and page:

☐ Your e-mail address is assigned to more than 1 plant in Sunny Portal.

Plant Selection Menu Item

Under the "Plant Selection" menu item, you can select the desired plant (see Section 5 "User Interface of the Sunny Home Manager Plant", page 20).

Plant List Page

The following data is shown for each plant:

- Plant power in kWp
- Total yield so far
- Total yield for the following time periods:
  - Current day
  - Previous day
  - Current month
- Specific plant yield (kWh/kWp) for the following time periods:
  - Current month
  - Current year

By default, the plant list is always sorted in ascending order according to the specific plant yield. You can also sort the plant list by other values and in descending order (see Section 7 "Page Settings", page 38).

6.2 My Sunny Home Manager Plant

6.2.1 Plant Profile

Sunny Portal compiles the plant profile from information that you can enter in different Sunny Portal pages.

The following information can be displayed in the plant profile:

Information	Configuration
Location	(see Section 12.2 "Changing Plant Data", page 74)
Operator	(see Section 12.6 "Changing Operator Data", page 77)
Commissioning	(see Section 12.2 "Changing Plant Data", page 74)
Plant power	(see Section 12.4 "Setting the Plant Power", page 75)
Annual production	(see Section 12.12 "Calculating the Predicted Annual Yield", page 83)
CO2 avoided	(see Section 12.11 "Entering the Value of CO_2 Savings", page 83)
Modules	(see Section 12.4 "Setting the Plant Power", page 75)
Angle of inclination	(see Section 8.10 "Entering the Generator Capacity", page 48)
Tracking	
Inverter	The Sunny Portal receives this information from the devices.
Communication	
Description	(see Section 12.5 "Changing the Plant Description", page 77)
Plant image	(see Section 12.7 "Changing/Deleting the Plant Image", page 78)

6.2.2 Current Status and Forecast

The data displayed depends on the connected energy meter types. The data can only be completely displayed if at least the following energy meter types are connected to the Sunny Home Manger:

- Feed-in meter
- Consumption meter

Availability of forecast data

The forecast data in the "Forecast and Recommended Action" area are not available in all countries.

Current Status Area

The following is required to display the current status area:

☐ The data request interval is set to "**Automatic**" (see Section 8.7 "Setting the Data Request Interval", page 45).

In the **Current Status** area, the following current PV plant data is displayed:

- PV power
- Grid feed-in
- Self-consumption
- Purchased electricity
- Consumption
- Self-consumption rate

The animated graphic visualizes the following current data:

- Grid feed-in
- Purchased electricity
- Self-consumption

Forecast and Recommended Action Area

The **Forecast and Recommended Action** diagram visualizes the following information:

• Tariff for the electricity purchased from the grid
• Expected PV power*
• Weather forecast for the current date*

* Data is not available in all countries.

Tip: Click the diagram and while holding the left mouse button pressed, move the mouse left or right. This allows you to select another time period.

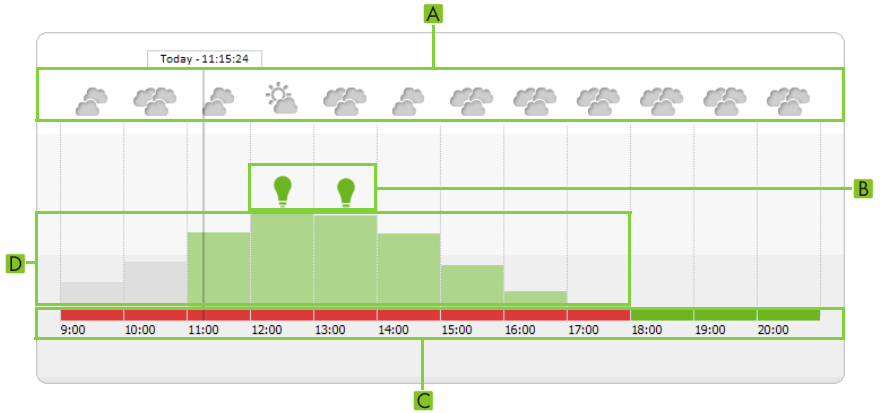


Figure 3: **Forecast and Recommended Action** diagram (example)

Item	Explanation
A	Weather forecast*
B	Suitable time for manually switching on loads. The Sunny Home Manager takes the following information into consideration for the recommended action: • Expected PV power* • Expected energy consumption of the household and loads connected to the SMA radio-controlled sockets. • Feed-in compensation (see Section 12.8 "Feed-In Compensation, Self-Consumption Tariff and Electricity Tariff", page 80) • Electricity tariff (see Section 12.8 "Feed-In Compensation, Self-Consumption Tariff and Electricity Tariff", page 80) • Optimization target (see Section 12.10 "Setting the Optimization Target", page 82) • Azimuth and tilt angle (see Section 12.1 "Entering the String Properties", page 73)
C	Tariff for the electricity purchased from the grid. • Red: Expensive • Green: Good value If you have only entered 1 electricity tariff, green is always displayed. • Other colours: Electricity tariffs between the most expensive and the lowest electricity tariff
D	Expected PV power*

* Data is not available in all countries.

6.2.3 "Energy Balance"

The following is required to display this page:

☐ At least 1 consumption meter or 1 feed-in meter is connected to the Sunny Home Manager.

The data on this page can only be completely displayed if at least the following energy meter types are connected to the Sunny Home Manger.

- Feed-in meter
- Consumption meter

Delayed Display of Data as a Result of Incompatible Energy Meter

When using incompatible energy meters, there may be a delay in the data being displayed in the "Current" tab.

- Use energy meters recommended by SMA (see planning guidelines "Increased Self-consumption - Sunny Backup / Sunny Home Manager" at www.SMA-Solar.com).

The **Energy Balance** page consists of the following tabs:

Tab	Content
"Current"	**The following is required to display this tab:** ☐ The data request interval is set to "Automatic" (see Section 8.7 "Setting the Data Request Interval", page 45). This tab shows the following current data: • Current grid feed-in • Current self-consumption • Current generated PV power • Current purchased electricity • Current consumption • Maximum active power that may be fed into the power distribution grid
"Day"	• Daily yield • Grid feed-in on one day • Self-consumption on one day • Purchased electricity on one day • Daily consumption • Self-consumption rate on one day • Maximum active power that may be fed into the power distribution grid

Tab	Content
"Month"	• Monthly yield • Total monthly grid feed-in and grid feed-in on the days of a month • Total monthly self-consumption and self-consumption on the days of a month • Total monthly purchased electricity and purchased electricity on the days of a month • Monthly consumption • Monthly self-consumption rate
"Year"	• Annual yield • Total annual grid feed-in and grid feed-in in the months of a year • Total annual self-consumption and self-consumption in the months of a year • Total annual purchased electricity and purchased electricity in the months of a year • Annual consumption • Self-consumption rate of a year
"Total"	• Total yield • Total grid feed-in • Total self-consumption • Total purchased electricity • Total consumption • Total self-consumption rate

6.2.4 "Load Balance and Control"

The following is required to display this page:

☐ SMA radio-controlled sockets are configured in the Sunny Home Manager plant (see Section 9.2 "Configuring SMA Radio-Controlled Sockets", page 51).

This page consists of the following tabs:

Tab	Content
"Current"	**The following is required to display this tab:** ☐ The data request interval is set to "Automatic" (see Section 8.7 "Setting the Data Request Interval", page 45). This tab shows the following current data: • Power consumption of the connected loads • Current operating mode of the SMA radio-controlled sockets (see Section 9.3 "Setting the Operating Mode of the SMA Radio-Controlled Socket", page 57) • Thick lines in the diagram: set time periods (see Section 9.2.10 "Configuring the Time Period", page 55) Tip: You can select the SMA radio-controlled sockets that the diagram is to display (see Section 7.3 "Showing and Hiding SMA Radio-Controlled Sockets", page 39).
"Day"	• Power consumption of the connected loads on the selected day • Last set operating mode of the SMA radio-controlled socket • Thick lines in the diagram: set time periods (see Section 9.2.10 "Configuring the Time Period", page 55) • History of each SMA radio-controlled socket: If 1 SMA radio-controlled socket was already configured for various loads, ⊞ is displayed under the diagram on the left of the SMA radio-controlled socket icon. By clicking the icon, the history of all loads is displayed for those that were configured for the SMA radio-controlled socket. Tip: You can select the SMA radio-controlled sockets that the diagram is to display (see Section 7.3 "Showing and Hiding SMA Radio-Controlled Sockets", page 39).

Tab	Content
"Month"	• Power consumption of the connected loads on the days of a month • Total power consumption of the connected loads in the selected month • History of each SMA radio-controlled socket: If 1 SMA radio-controlled socket is already configured for various loads, ⊞ is displayed under the diagram on the left of the SMA radio-controlled socket icon. By clicking the icon, the history of all loads is displayed for those that were configured for the SMA radio-controlled socket. Tip: You can select the SMA radio-controlled sockets that the diagram is to display (see Section 7.3 "Showing and Hiding SMA Radio-Controlled Sockets", page 39).
"Year"	• Power consumption of the connected loads in the months of a year • Total power consumption of the connected loads in the selected year • History of each SMA radio-controlled socket: If 1 SMA radio-controlled socket is already configured for various loads, ⊞ is displayed under the diagram on the left of the SMA radio-controlled socket icon. By clicking the icon, the history of all loads is displayed for those that were configured for the SMA radio-controlled socket. Tip: You can select the SMA radio-controlled sockets that the diagram is to display (see Section 7.3 "Showing and Hiding SMA Radio-Controlled Sockets", page 39).
"Total"	• Power consumption of the connected loads in the individual years • Total power consumption of the connected loads • History of each SMA radio-controlled socket: If 1 SMA radio-controlled socket is already configured for various loads, ⊞ is displayed under the diagram on the left of the SMA radio-controlled socket icon. By clicking the icon, the history of all loads is displayed for those that were configured for the SMA radio-controlled socket. Tip: You can select the SMA radio-controlled sockets that the diagram is to display (see Section 7.3 "Showing and Hiding SMA Radio-Controlled Sockets", page 39).

6.2.5 "Energy and Power"

The following is required to display this page:

☐ No consumption meter and no feed-in meter is connected to the Sunny Home Manager.

This page consists of the following tabs:

Tab	Content
"Day"	• Trend of the PV power over the day
"Month"	• Total yield on the days of a month • If activated on the "Plant Properties" page: average expected yield (see Section 12.12 "Calculating the Predicted Annual Yield", page 83)
"Year"	• Total yield in the months of a year • If activated on the "Plant Properties" page: average expected yield (see Section 12.12 "Calculating the Predicted Annual Yield", page 83).
"Total"	• Total yield of the previous years • If activated on the "Plant Properties" page: average expected yield (see Section 12.12 "Calculating the Predicted Annual Yield", page 83)

6.2.6 "Annual Comparison"

Tab	Content
"Total Yield"	• Yield trend of the previous years • Average yield trend of the previous years • If activated on the "Plant Properties" page: average expected yield (see Section 12.12 "Calculating the Predicted Annual Yield", page 83).
"Specific Plant Yield"	The specific plant yield is a key figure for describing a PV plant's quality. Plant-specific factors, such as location, tilt angle, shading, module and inverter types are taken into consideration to calculate the specific plant yield. The specific plant yield enables you to compare various PV plants at various locations. • Trend of the specific plant yield of each previous year • Average trend of the specific plant yield of the previous years • If activated on the "Plant Properties" page: average expected yield (see Section 12.12 "Calculating the Predicted Annual Yield", page 83).

6.2.7 "Plant Monitoring"

This page can display the following information:

- Plant configuration
- Communication monitoring
- Inverter comparison

Plant Configuration

The following is required to display this information:

☐ You have detected new *Bluetooth* devices with the configuration wizard that have not yet been added to the Sunny Home Manager plant (see Section 10.1 "Adding Devices to the Plant/ Replacing Devices", page 61),

You access the configuration wizard through the plant configuration. Using the configuration wizard, you can add new devices to the plant or replace devices.

Communication Monitoring

Communication monitoring displays the current communication status between the Sunny Home Manager and the Sunny Portal. If the Sunny Home Manager does not communicate with the Sunny Portal for longer than the time set, the Sunny Portal displays an error and notifies you by e-mail (see Section 11.4 "Setting Communication Monitoring", page 71).

The communication monitoring status is displayed with the following symbols:

Symbol	Status	Explanation
	Deactivated	Communication monitoring is not set (see Section 11.4 "Setting Communication Monitoring", page 71).
	OK	Communication with Sunny Portal is OK. The time of last contact is displayed.
	Fault	Communication with Sunny Portal is interrupted. The "Details" link provides you with detailed information on the time of last contact. The error is displayed until it is cleared. If the error is not cleared, Sunny Portal sends another e-mail reminder up to three days after the first e-mail was sent.
	E-mail reminder is activated.	Clicking the bell icon stops the sending of reminder e-mails for the current error. If a new error occurs, the e-mail reminder is sent again.

Inverter Comparison

The following is required to display this information:

☐ There are at least two inverters in the PV plant.

Sunny Portal can recognize possible yield losses via the inverter comparison. If the specific yield of an inverter differs significantly from the mean yield of all the inverters, Sunny Portal can inform you via e-mail (see Section 11.5 "Setting the Inverter Comparison", page 72).

Symbol	Status	Explanation
	Deactivated	The inverter comparison is not activated (see Section 11.5 "Setting the Inverter Comparison", page 72).
	OK	The yields of the monitored inverters are within the configured range. The total yield of the last day for all inverters is displayed.
	Fault	The specific yield is outside the tolerance for at least one monitored inverter. You can read the following using the "Details" link: • The level of the specific yield of the affected inverters • The level of the average value of all monitored inverters

6.2.8 "System Logbook"

This page shows messages on the PV plant status. The following message types are available:

- Info
- Warning
- Disturbance
- Fault

The messages help you to identify plant disturbances, for example. The number of unconfirmed messages comes after the colon of the page name in the menu.

Example: display of unconfirmed messages

"System Logbook: 5" mean that there are 5 unconfirmed messages of type fault, disturbance or warning.

You can filter and confirm messages that you have read (see Section 11.2 "System Logbook", page 66).

6.3 "Performance Ratio"

The following is required to display this page:

☐ A Sunny SensorBox is in your Sunny Home Manager plant.

The performance ratio is a site-dependent measure of the quality of a PV plant that is independent of location (for information on the performance ratio, see technical information "Performance Ratio - Quality Factor for the PV Plant" at www.SMA-Solar.com).

This page displays the following PV plant data:

- Mean values of performance ratio of the day of a month
- Mean values of performance ratio of the months of a year

6.4 "Report"

6.4.1 "Daily Plant Report"

This page displays the following inverter data:

- Table with daily yield, monthly yield, annual yield
- Diagram with the development of the meter reading over the hours of a day

This page can be sent along with a "Daily Info Report" (see Section 11.3.2 "Configuring Reports", page 68).

6.4.2 "Monthly Plant Report"

This page displays the following inverter data:

- Table with monthly yield and annual yield
- Diagram with the development of the meter reading over the days of a month

A copy of this page can be sent along with a "Monthly Info Report" (see Section 11.3.2 "Configuring Reports", page 68).

6.5 "Devices"

A page with the respective inverter data for each inverter is displayed under the menu item "Devices":

- Diagram with the development of the meter reading in the months of a year
- Diagram with the mean value of power of one day in hours

6.6 "Sensors"

The following is required to display this menu item:

☐ A Sunny SensorBox is in your Sunny Home Manager plant.

A page with the measured values of the respective Sunny SensorBox is displayed for each Sunny SensorBox under the menu item "Sensors".

6.7 "Configuration"

6.7.1 "Plant Properties"

This page consists of the following tabs:

Tab	Content
"Plant Data"	Displays the general data on the PV plant. You can configure plant settings using this tab (see Section 12 "Plant Settings", page 73).
"Operator"	Displays the plant operator's contact information.
"Parameters"	Displays the following data: • Feed-in compensation • Limiting of the active power feed-in • Electricity tariff • Optimization target • CO_2 savings • Expected yield • If there is a Sunny SensorBox in your Sunny Home Manager plant: performance ratio
"Data Releases"	Displays to which extent SMA Solar Technology AG or third parties may use your data. You can edit the data releases using this tab (see Section 12.14 "Editing your Data Releases", page 85).

6.7.2 "System Presentation" Page

You have the following options with the "System Presentation" page:

- Send a link to your released pages to third parties (see Section 7.4.1 "Releasing Pages for Viewing in Sunny Portal", page 40).
- Incorporate the "Plant Profile" page in other websites.

6.7.3 "Device Overview" Page

This page consists of the following tabs:

- "Device Overview"
- "Overview of New Devices"

"Device Overview"

This tab displays information on all the *Bluetooth* devices in your plant.

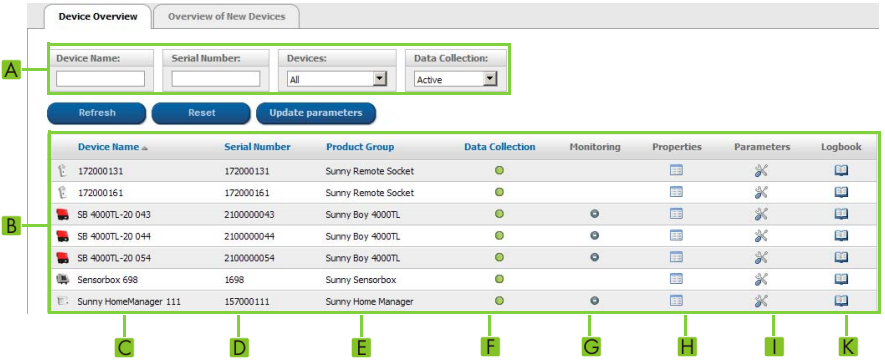


Figure 4: "Device Overview" tab

Item	Description	Explanation
A	Filter	Text fields and drop-down lists for the device overview filters(see Section 8.1 "Filtering the "Device Overview" Page", page 42).
B	Device List	-
C	"Device Name"	Device name
D	"Serial Number"	Serial number of the device
E	"Product Group"	Device product group, e.g., Sunny Home Manager, Sunny Boy 3000
F	"Data Collection"	Displays whether the device data is to be used on your Sunny Portal pages (see Section 10.2 "Activating/ Deactivating Devices", page 62).
G	"Monitoring"	Displays whether the communication monitoring or the inverter comparison is activated ( ) or deactivated ( ) for the devices (see Section 11 "Plant Monitoring", page 66).

Item	Description	Explanation
H	"Properties"	Opens tab with device properties (see Section 8.2 "Calling Up the Properties of a Device", page 42). You can perform settings on the devices using the "Properties" tab.
I	"Parameters"	Opens the "Parameters" tab with the device parameters (see Section 8.3 "Calling Up the Device Parameters", page 43).
K	"Logbook"	Opens the "System Logbook" tab with the messages for this device (see Section 11.2.1 "Calling up and Filtering Messages", page 66).

"Overview of New Devices"

Using this tab, you can add new *Bluetooth* devices to the plant or replace devices using the configuration wizard (see Section 10.1 "Adding Devices to the Plant/Replacing Devices", page 61).

6.7.4 "Report Configuration"

This page displays whether and which types of reports you have e-mailed by Sunny Portal (see Section 11.3 "Reports", page 68).

6.7.5 "User Management"

The following is required to display this page:

☐ You are an "Installer" or "Plant Administrator" (see Section 13 "User Management", page 86).

This page displays all users who were created for the Sunny Home Manager plant (see Section 13.2 "Creating a New User", page 87).

6.8 "User Info/Logout"

6.8.1 "User Information"

The following is required to display this page:

☐ You are an "Installer" or "Plant Administrator" or "Standard User" (see Section 13 "User Management", page 86).

This page displays the data of the logged in user.

The following changes are possible:

- Changing user information (see Section 13.5 "Changing User Information", page 88)
- Changing the Sunny Portal password (see Section 14.3.1 "Changing the Sunny Portal Password", page 90)

6.8.2 "Logout"

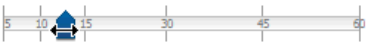
Using the "Logout" menu item, you can log out of the Sunny Portal user interface (see Section 4.2 "Logging In and Out of Sunny Portal", page 19).

7 Page Settings

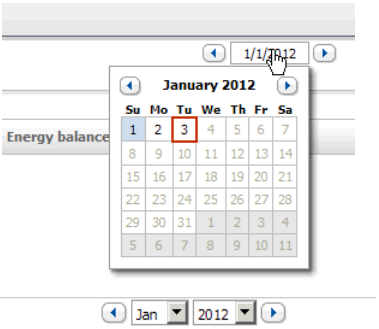
7.1 Configuring Settings In Diagrams

7.1.1 Setting the Display Period

Depending on the diagram, you can set various display periods. The control for setting the display period is below the diagram.



- If there is a scroll bar below the diagram, click the blue arrow and keeping the left mouse button pressed, set the time period.
- If there is a date and arrow icon below the diagram, set the date using the arrow icons or a calendar:
  - To set the date using the arrow icons, browse backward using ◀ and browse forward using ▶ and set the desired date.
  - To set the date using a calendar, click the date between the arrow icons and select the desired date.



  - If there are drop-down lists between the arrow icons, select the desired time period in the drop-down lists.

7.1.2 Saving Diagram Data

You can save diagram data as csv files.

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. If there is a gearwheel icon on the right below the diagram, move the mouse pointer onto the gearwheel icon and select in the drop-down menu.
2. If there are two icons on the right below the diagram, select .
3. Select [Save].
4. Select the destination directory.
5. Select [Save].

7.1.3 Printing Diagram Data

1. Move the mouse pointer onto on the right under the diagram.
   ☑ A drop-down menu opens.
2. Select .
3. Select [Print].
4. Select the desired printer and select [Print].

7.1.4 Enlarging the View

- If is on the right below the diagram, move the mouse pointer onto and select .
- If there are two icons on the right below the diagram, select .

7.1.5 Showing and Hiding Legends

You can show and hide the diagram legends on the inverter pages below the menu item "Devices".

1. Move the mouse pointer onto on the right under the diagram.
   ☑ A drop-down menu opens.
2. To hide the legend, select .
3. To show the legend, select .

7.2 Sorting the Plant List

By default, the plant list is always sorted in ascending order according to the specific plant yield. You can also sort the plant list by other values and in descending order.

- To sort the list by another value, click another blue value in the header of the list.
- To sort the list in descending order, click the blue value in the header again.

7.3 Showing and Hiding SMA Radio-Controlled Sockets

- To show the SMA radio-controlled socket data in the diagram on the "Load Balance and Control" page, activate the checkbox below the diagram next to the name of the SMA radio-controlled socket.
- To hide the SMA radio-controlled socket data in the diagram on the "Load Balance and Control" page, deactivate the checkbox below the diagram next to the name of the SMA radio-controlled socket.

7.4 Publishing Pages

7.4.1 Releasing Pages for Viewing in Sunny Portal

If you release pages for viewing in Sunny Portal, other Sunny Portal users can view the pages.

You can release the following pages for viewing in Sunny Portal:

- "Plant Profile"
- "Energy Balance"
- "Load Balance and Control"
- "Energy and Power"
- "Annual Comparison"

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select the desired page in the page and drop-down menu.
2. In the Contents area, select [Configuration – "Name of the Page"].
3. Activate the **Also release page on www.sunnyportal.com** checkbox in the "Approval" area.
4. To send the page by e-mail, select **Send the website by e-mail**, enter the e-mail address of the recipient, select [Send e-mail], and select ✖.
5. Select [Save].

7.4.2 Presenting Sunny Portal Pages on the Internet

Each of your Sunny Portal pages has its own URL. Using these URLs, you can set a link to your Sunny Portal page on other websites.

You can link other websites to the following pages:

- "Plant Profile"
- "Energy Balance"
- "Load Balance and Control"
- "Energy and Power"
- "Annual Comparison"

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select the desired page in the page and drop-down menu.
2. In the Contents area, select [Configuration – "Name of the Page"].
3. To view a preview of the page, select **Open page in a new window**.
4. Copy the URL from the text field "URL of the Page" to the clipboard.
5. Copy the URL from the clipboard to a program for creating websites (e.g. Microsoft Office Frontpage) or integrate it into your own website by means of a so-called inline frame.

8 Device Settings

8.1 Filtering the "Device Overview" Page

You can find individual devices more easily if you filter the device overview.

Requirements:

☐ You are a "Standard User", "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Device Overview** in the page and drop-down menu.
2. Set one or more of the following filters:

Text Field or Drop-down List	Explanation
"Device Name"	Complete name of the device or part of the device name
"Serial Number"	Complete serial number of the device or parts of the serial number
"Devices"	Searched device class, e.g. "Photovoltaic Inverter", "Sunny Home Manager".
"Data Collection"	• "All": activated or deactivated devices are searched for. • "Active": only activated devices are searched for. • "Deactivated": only deactivated devices are searched for.

3. Select [Refresh]. Tip: You can sort the devices in the device overview in ascending or descending order by clicking a blue entry in the table head ("Device Name", "Serial Number", "Product Group", "Data Collection").
4. To clear the filter, select [Reset].

8.2 Calling Up the Properties of a Device

The tab with the device properties displays information on each device.

Depending on the device and the device settings, various device properties can be displayed on this tab.

Requirements:

☐ You are a "Standard User", "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Device Overview** in the page and drop-down menu.
2. In the row for the device and the "Properties" column, select .

8.3 Calling Up the Device Parameters

The parameters of a device are described in the respective device manual. You can only read the device parameters on this page, you cannot change them. If you want to change the parameters, use the Sunny Explorer software (see Sunny Explorer help). You can obtain Sunny Explorer free of charge at www.SMA-Solar.com.

Requirements:

☐ You are a "Standard User", "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Device Overview** in the page and drop-down menu.
2. Select in the device line and the "Parameters" column.
   ☑ You can find the parameters in the parameter list.
   ✖ The displayed parameters are not current?
   Device parameters may have been changed using the Sunny Explorer software, but due to connection problems, the changes are not displayed in the Sunny Portal.
   - Update parameters (see Section 8.4).
3. To display the parameter changes, select in the "History" column.

8.4 Updating Parameters

It makes sense to update the parameters in the following case:

- Device parameters were changed using the Sunny Explorer software, but the changes are not displayed in the Sunny Portal.

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Device Overview** in the page and drop-down menu.
2. Select [Update Parameters].
3. Select in the device line and the "Parameters" column.
   ☑ You can read the current parameters in the parameter list.
   ✖ The current parameters are still not displayed in the parameter list?
   The time after which the current parameters are displayed depends on the set data request interval (see Section 8.7). The Sunny Home Manger may not yet have transferred the updated parameters to the Sunny Portal.
   - Call up the parameter list again later.

8.5 Ascertaining the Software Package Version

Requirements:

☐ You are a "Standard User", "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Device Overview** in the page and drop-down menu.
2. Select in the device line and the "Parameters" column.

   ☑ You can read the software package version in the parameter list.

8.6 Configuring the Energy Meter

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Call up the device properties of the Sunny Home Manager (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].

   ☑ The menu for setting the device properties opens.
3. In the drop-down lists located in the "Meter Configuration" area, select the energy meter type that is connected to the respective meter input:

Connected Energy Meter Type	Drop-down List
Energy meter with D0 interface	• Select **D0**
Bidirectional meter with D0 interface	• Select **D0** • Activate the field **Bidirectional Meter (Supply and Feed-in)** ☑ The "Meter Input 2" area is not available.
Energy meter with S0 interface.	• Select **S0.** • <in the text field "S0 pulses / kWh", specify the pulse rate of the energy meter (see energy meter manual)
No energy meter	• Select **No Meter**.

4. Select [Save].

8.7 Setting the Data Request Interval

The data request interval defines how often the Sunny Home Manager sends data to the Sunny Portal and how often it requests data from the Sunny Portal.

The Sunny Portal can only display current Sunny Home Manager data and switch SMA radio-controlled sockets if the data request interval is set to "Automatic".

SMA Solar Technology AG only recommends setting the data request interval to "Hourly" or "Daily" if you can establish the Internet connection using a GSM modem. Depending on your GSM tariff, you will therefore avoid additional costs.

NOTICE

Additional costs when using a cellular modem

If you set up the Internet connection using a cellular modem (e.g. a GSM modem), addition costs can occur as a result of frequent data requests depending on the mobile service tariff.

- When using a cellular modem, additional costs can be prevented by setting the data request interval to "Hourly" or "Daily".
- If you are not using a cellular modem, set the data request interval to "Automatic".

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Call up the device properties of the Sunny Home Manager (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].
   ☑ The menu for setting the device properties opens.
3. In the "Data Request Interval" area, select the desired option **Automatic**, **Hourly** or **Daily**:

Checkbox	Meaning
"Automatic"	The Sunny Home Manager updates data on the "Current Status and Forecast" pages and on the "Current" tab within a few seconds. The Sunny Home Manager sends data that is displayed on other pages to the Sunny Portal between a few minutes and up to a maximum of 15 minutes. If electrical loads are controlled by SMA radio-controlled sockets, you must activate the **Automatic** option.
"Hourly"	The Sunny Home Manager sends data to the Sunny Portal hourly and requests data from the Sunny Portal. Settings made on the Sunny Portal are sent to the Sunny Home Manager in less than 60 minutes.

Checkbox	Meaning
"Daily"	The Sunny Home Manager sends data to the Sunny Portal every 24 hours and requests data from the Sunny Portal. Settings made on the Sunny Portal are sent to the Sunny Home Manager in less than 24 hours.

4. Select [Save].

8.8 Activating/Deactivating Automatic Software Updates

If the automatic software update is activated, the Sunny Portal regularly checks whether there are update files for the Sunny Home Manager or for the PV plant devices. If there are update files, these are automatically downloaded and the devices are updated.

You can activate/deactivate the automatic software update for:

- Sunny Home Manager
- PV plant devices

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

Activating / Deactivating the Automatic Software Update for the Sunny Home Manager

1. Call up the device properties of the Sunny Home Manager (see Section 8.2 "Calling Up the Properties of a Device", page 42)).
2. Select [Edit].

   ☑ The menu for setting the device properties opens.
3. To activate the automatic software update, activate the **Sunny Home Manager** checkbox in the "Automatically Update Software" area.
4. To automatically deactivate the software update, deactivate the **Sunny Home Manager** checkbox in the "Automatically Update Software" area.
5. Select [Save].

Activating / Deactivating the Automatic Software Update for PV Plant Devices

1. Call up the device properties of the Sunny Home Manager (see Section 8.2 "Calling Up the Properties of a Device", page 42)).
2. Select [Edit].
   ☑ The menu for setting the device properties opens.
3. To activate the automatic software update, activate the **PV Plant Devices** checkbox in the "Automatically Update Software" area.
4. To deactivate the automatic software update, deactivate the **PV Plant Devices** checkbox in the "Automatically Update Software" area.
5. Select [Save].

8.9 Entering the Line Conductor

Sunny Portal can display the line conductor to which each inverter is connected in the device properties. To display the line conductor, you must enter the line conductor.

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select the inverter's device properties (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].
   ☑ The menu for setting the device properties opens.
3. In the "Phase" area, activate the option of the line conductor to which the inverter is connected.
4. Select [Save].

8.10 Entering the Generator Capacity

The generator capacity is the maximum power of the PV modules that are connected to one inverter.

Procedure:

- Calculate the string properties using the generator capacity (see Section 12.1 "Entering the String Properties", page 73).

  or

- Enter the generator capacity manually

SMA Solar Technology AG recommends calculating the generator capacity using the string properties. A string describes a group of series-connected PV modules. Normally, a PV plant is made up of multiple strings. Each string has specific properties, such as the deviation from south (azimuth) or the tilt angle of the roof.

Entering the string properties provides the following advantages:

- The Sunny Portal can determine the generator capacity more precisely.
- The Sunny Home Manager can produce more exact yield forecasts and control loads more efficiently.

Entering the Generator Capacity Manually

You can find out the connected generator capacity present on each inverter from your installer. Using the generator capacity, Sunny Portal can calculate the plant power of your PV plant (see Section 12.4.2 "Calculating the Plant Power", page 76).

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

Plant Power is required for limiting the active power feed-in

You must enter the generator capacity correctly to ensure limiting of the active power feed-in to the correct value (see Section 12.9 "Configuring the Limiting of the Active Power Feed-In", page 81). If there are changes to the installed generator capacity, you have to adjust this value.

1. Call up the inverter properties (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].

   ☑ The menu for setting the device properties opens.
3. In the "Generator Capacity" area, enter the generator capacity in the "kWp" text field.
4. Select [Save].

8.11 Changing the Device Name

The serial number of the device is displayed as the default device name.

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

Requirements of the device name:

☐ The device name must be made of no more than 20 characters.

1. Select the device properties of the *Bluetooth* device (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].
   ☑ The menu for setting the device properties opens.
3. Enter a device name in the "Device Name" or "Name of Load" text field.
4. Select [Save].

8.12 Changing a Device Description

With the exception of the SMA radio-controlled sockets, you can enter any description for each device. The device description is displayed in "Device Properties".

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Call up the device properties of the SMA device (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].
   ☑ The menu for setting the device properties opens.
3. Enter a description in the "Description" text field.
4. Select [Save].

9 Load Control

9.1 Safety when Configuring SMA Radio-controlled Sockets

⚠ WARNING

Danger to life by disconnecting medical devices

Unintentionally disconnecting medical devices can result in life-threatening situations.

- Do not connect any medical devices to the SMA radio-controlled socket.

⚠ WARNING

Risk of injury and fire due to unintentional and unattended switching of loads

Loads that are activated unintentionally and while unattended via an SMA radio-controlled socket can cause injuries and fires (e.g. iron).

- Do not connect any loads to the SMA radio-controlled socket that can cause damage if switched on unintentionally.

NOTICE

Damage to loads

Frequently switching a load on and off can damage certain loads.

- Ask the load manufacturer whether the load is suitable for control via an SMA radio-controlled socket or a timer.
- Configure the SMA radio-controlled sockets so that the loads connected to them are not switched on or off more frequently than the load manufacturer specifies.
- Do not connect any loads to the SMA radio-controlled socket that require a continuous power supply.

9.2 Configuring SMA Radio-Controlled Sockets

9.2.1 Requirements

- ☐ You have already registered your SMA radio-controlled sockets in the Sunny Portal (see Section 10.1 "Adding Devices to the Plant/Replacing Devices", page 61).
- ☐ The lower horizontal LED of the SMA radio-controlled sockets lights up blue.
- ☐ The data request interval must be set to "Automatic" in the Sunny Portal (see Section 8.7 "Setting the Data Request Interval", page 45).
- ☐ The animated graphic on the "Current Status and Forecast" page displays the current data.
- ☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

9.2.2 Procedure

Procedure		See
1	Activate/deactivate data collection	Section 9.2.3
2	Select the load types	Section 9.2.4
3	Enter the load name	Section 9.2.5
4	Enter the power consumption	Section 9.2.6
5	Enter the maximum program operating time	Section 9.2.7
	or	Section 9.2.8
	Enter the minimum switch-on time and switch-off time	
6	Configure time period	Section 9.2.10

9.2.3 Activating/Deactivating Data Collection

You can set whether or not the Sunny Portal is to accept data from the SMA radio-controlled socket.

If you would like to control loads using the SMA radio-controlled socket, you must activate the data collection.

If you deactivate the data collection, no SMA radio-controlled socket data is displayed in the Sunny Portal and you cannot control any loads using the SMA radio-controlled socket. All SMA radio-controlled socket data recorded up to this time remains in the Sunny Portal.

1. Call up the SMA radio-controlled socket properties (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].
   ☑ The menu for setting the device properties opens.
3. To activate the data collection, activate the **Active** checkbox.

   or
4. To deactivate the data collection, deactivate the **Active** checkbox.

9.2.4 Selecting the Load Types

1. Call up the SMA radio-controlled socket properties (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].
   ☑ The menu for setting the device properties opens.
3. Select the type of load connected from the "Type of Load" drop-down list:

Type of Load	Explanation
"Program-controlled - Self-configured"	The connected loads run through the fixed, defined programs and may not be interrupted while the program is running.
"Program-controlled - Dish washer"	The connected load is a dish washer.
"Program-controlled - Washing machine"	The connected load is a washing machine.
"Not program-controlled - Self-configured"	The connected load does not run through any fixed, defined programs and may be interrupted during operation, e.g. pond pump.
"Measure Only"	Only the power consumption of the connected device is to be measured.

4. **Changing the operating mode of the SMA radio-controlled socket**

   If you have changed the type of load, the SMA radio-controlled socket leaves the Automatic operating mode after approximately 2 minutes.

   - To confirm the change, reset the operating mode to **Automatic** once the SMA radio-controlled socket has been configured 9.3.

State of the SMA radio-controlled socket after load operation and interrupted connection

Depending on the load type, the SMA radio-controlled socket can either be switched on or switched off after load operation.

- "Program-controlled" load type: switched on
- "Not program-controlled" load type: switched off

The SMA radio-controlled socket also switches into the respective state if the connection between the Sunny Home Manager and the SMA radio-controlled socket is interrupted for more than 15 minutes. In this case, you must then reset the SMA radio-controlled socket to the "Automatic" operating mode (see Section 9.3).

9.2.5 Entering the Load Name

You can identify the SMA radio-controlled socket and the connected loads in the Sunny Home Manager plant using the load names.

- Enter a load name in the "Name of Load" text field, e.g. **Washing machine basement**.

9.2.6 Entering the Power Consumption

The power consumption is the power typically required by a load for operation (see load manual).

Requirements:

☐ The type of the connected load is "Program-controlled" or "Not Program-controlled".

- Enter the power of the connected load in the "Power Consumption" text field.

9.2.7 Enter the Maximum Program Operating Time

The maximum program operating time is the time that a program-controlled load requires for its longest program. The maximum program operating time defines the latest time a load must be switched on so that its longest program can be completed within the specified time limits.

Example: Maximum program operating time for a washing machine

You have defined a time slot from 10:00 a.m. to 6:00 p.m. for your washing machine (see Section 9.2.10 "Configuring the Time Period", page 55), i.e., your washing machine's washing cycle is to be completed by 6:00 p.m.

The longest washing cycle of your washing machine lasts 3 hours. You therefore enter at least **3 hours** as the maximum program operating time when configuring the SMA radio-controlled socket. In this case, the washing machine starts at the latest at 3 p.m. so that the longest washing cycle can be completed. For a shorter duration of the washing cycle that is actually selected, the Sunny Home Manager still focuses on the maximum program operating time.

Requirements:

☐ The type of the connected load is "Program-controlled".

- Enter the maximum program operating time for the connected load in the "Max. Program Operating Time" text field (see the load manual).

9.2.8 Entering the Minimum Switch-On Time

The minimum switch-on time is the minimum time that the connected load must remain switched on, for example, to complete its starting sequence or complete a work sequence.

Requirements:

☐ The type of the connected load is "Not Program-controlled - self-configured".

Delayed switch-on of some loads possible

Some loads may not operate immediately after switching on the SMA radio-controlled socket, e.g. heat pumps for water storage tanks. Immediate switch-on can only be ensured for the SMA radio-controlled socket, but not for the connected loads.

- Enter the minimum switch-on time in the "Minimum Switch-on Time" text field. Take into consideration possible delays with the connected load when it starts.

9.2.9 Entering the Minimum Switch-Off Time

The minimum switch-off time is the minimum time the connected load must remain switched off, for example, to prevent overheating or enable restarting.

Requirements:

☐ The type of the connected load is "Not Program-controlled - Self-configured".

- Enter the minimum switch-off time in the "Minimum Switch-off Time" text field.

9.2.10 Configuring the Time Period

The time period defines during which time the Sunny Home Manager can switch on the SMA radio-controlled socket. You can set several time periods for each SMA radio-controlled socket.

A time period from 8:00 a.m. to 6:00 p.m. is set by default. The time period is displayed as a blue column on the time scale.

Shorter electrical endurance of the SMA radio-controlled socket through the frequent switching of loads

The more often the SMA radio-controlled socket switches loads on and off, the shorter the electrical endurance of the SMA radio-controlled socket

- When setting time periods and device operating times, ensure that the SMA radio-controlled socket does not have to switch on and off loads too often (electrical endurance of SMA radio-controlled socket, see Section "Technical Data" in the installation manual of the Sunny Home Manager)

Changing the Time Period

1. Select [Configure Time Period].
2. Select the time period on the time axis.
   ☑ The time period turns dark blue.
3. Click the start or end of the time period and keeping the left mouse button pressed, set the time period.
4. Select [End Configuration].
5. Select [Save].

Setting the Device Operating Time

The device operating time defines how long a load that is not program-controlled is to operate during a time period.

Requirements:

☐ The type of the connected load is "Not Program-controlled - Self-configured".

1. Select [Configure Time Period].
2. Select the time period on the time axis.
   ☑ The time period turns dark blue.
3. Using the scroll bar in the "Device Operating Time: x Minutes" area, set how long the load is to operate within the time period.
4. Select [End Configuration].
5. Select [Save].

Sub-dividing the Time Period

You can sub-divide individual time periods into shorter time periods. This way, you can control a load so that it does not continuously operate within a time period, but operates at intervals.

Example: Sub-dividing a time period

A pond pump is to operate every 2 hours for 45 minutes in the time period from 10:00 a.m. to 6:00 p.m.

Requirements:

☐ The type of the connected load is "Not Program-controlled - Self-configured".

1. Select [Configure Time Period].
2. Select the time period that is to be subdivided on the time axis.
   ☑ The time period turns dark blue.
3. Select **Sub-divide** and configure the settings:
   - Set the duration of the subsection from the "Device Operating Time per Slot" drop-down list.
   - Set the the desired period repetitions on the scroll bar.
   - Select [Sub-divide].

   ☑ The time period is displayed with the set periods on the time axis.
4. Select [End Configuration].
5. Select [Save].

Adding a Time Period

1. Select [Configure Time Period].
2. Select **Add Time Period** .
   ☑ A new time period is displayed in dark blue on the time axis.
3. Click the start or end of the time period and keeping the left mouse button pressed, set the time period.
4. Select [End Configuration].
5. Select [Save].

Deleting/Resetting the Time Period

You can only delete time periods that you have added yourself. You cannot delete the standard time period.

1. Select [Configure Time Period].
2. To delete an individual time period, select the time period.
   ☑ The time period turns dark blue.
3. Select **Delete Time Period** .
4. To reset the settings for the time period, select **Reset Settings** .
5. Select [End Configuration].
6. Select [Save].

9.3 Setting the Operating Mode of the SMA Radio-Controlled Socket

You have the following options for setting the operating mode of the SMA radio-controlled socket:

- Setting the operating mode using the Sunny Portal

  or

- Set the operating mode via the sensor button on the SMA radio-controlled socket (see the Sunny Home Manager installation manual)

Setting the Operating Mode using the Sunny Portal

Requirements:

☐ The SMA radio-controlled socket is configured for the connected load (see Section 9.2 "Configuring SMA Radio-Controlled Sockets", page 51).

☐ The *Bluetooth* LED of the SMA radio-controlled socket lights up blue.

☐ The data request interval must be set to "Automatic" in the Sunny Portal (see Section 8.7 "Setting the Data Request Interval", page 45).

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Load Balance and Control** in the page and drop-down menu.
2. Select the **Current** tab.
3. Move the mouse pointer on the operating mode in the "Operating Mode" column in the line of the desired SMA radio-controlled socket.

   ☑ A drop-down menu opens.
4. Select the desired operating mode.

Operating Mode	Explanation
"Automatic"	This cannot be set for the "Measure Only" load type. The SMA radio-controlled socket is controlled by the Sunny Home Manager. Depending on the current control command of the Sunny Home Manager, the SMA radio-controlled socket is either switched on or switched off in this mode.
"Switch on"	The SMA radio-controlled socket is not controlled by the Sunny Home Manager. The SMA radio-controlled socket is switched on and switches to the operating mode "Manual Switch On". The connected load can draw power.
"Switch off"	The SMA radio-controlled socket is not controlled by the Sunny Home Manager. The SMA radio-controlled socket is switched off and switches to the operating mode "Manual Switch Off". The connected load cannot draw any power.

5. Wait until the selected operating mode is displayed in the Sunny Portal user interface.

9.4 Controlling the Loads using SMA Radio-controlled Sockets

9.4.1 Controlling "Program-controlled" Loads

This section uses an example of a washing machine to describe how you can control "Program-controlled" loads using SMA radio-controlled sockets.

1. Make sure that the load can be controlled using the SMA radio-controlled socket:
   - Ask the load manufacturer whether the load is suitable for control via an SMA radio-controlled socket or a timer.
2. Connect the washing machine to the SMA radio-controlled socket.
3. Configure the SMA radio-controlled socket for the washing machine (see Section 9.2 "Configuring SMA Radio-Controlled Sockets", page 51).
4. Set the operating mode of the SMA radio-controlled socket to "Switch On" (see Section 9.3 "Setting the Operating Mode of the SMA Radio-Controlled Socket", page 57). Power supply to the washing machine is now enabled.
5. Load the washing machine with laundry.
6. Set the desired program on the washing machine.
7. Start the washing machine.
8. Set the operating mode of the SMA radio-controlled socket to "Automatic" (see Section 9.3).
   ☑ The SMA radio-controlled socket switches to "Switch Off" mode and is switched on by the Sunny Home Manager within the set time period.
   ✖ The Sunny Home Manager does not switch the SMA radio-controlled socket on?
   You may have set the SMA radio-controlled socket to "Automatic" at the beginning of the time period, e.g. the time period starts at 1:00 p.m. and you have set the SMA radio-controlled socket to "Automatic" after 1:00 p.m. If the washing cycle cannot be completed within the time period due to the maximum program operating time, the Sunny Home Manager only switches the SMA radio-controlled socket on within the next time period.
   - To set the connected load to start immediately, set the operating mode of the SMA radio-controlled socket to "Switch On" (see Section 9.3 "Setting the Operating Mode of the SMA Radio-Controlled Socket", page 57).

   ☑ After the washing machine stops operating, the SMA radio-controlled socket switches to "Switch On" mode.

9.4.2 Controlling "Not Program-controlled" Loads

This Section illustrates an example of a pond pump to describe how you can control a "Not Program-controlled" load using SMA radio-controlled sockets.

1. Connect the pond pump to the SMA radio-controlled socket.
2. Configure the SMA radio-controlled socket for the pond pump (see Section 9.2 "Configuring SMA Radio-Controlled Sockets", page 51).
3. Set the operating mode of the SMA radio-controlled socket to "Automatic" (see Section 9.3 "Setting the Operating Mode of the SMA Radio-Controlled Socket", page 57).
   ☑ The Sunny Home Manager switches the SMA radio-controlled socket on within the set time period.
   ✖ The Sunny Home Manager does not switch the SMA radio-controlled socket on?
   You may have set the SMA radio-controlled socket to "Automatic" after the beginning of the time period, e.g. the time period starts at 1:00 p.m. and you have set the SMA radio-controlled socket to "Automatic" after 1:00 p.m. If the load does not have the set device operation time available within the time period, the Sunny Home Manager only switches the SMA radio-controlled socket on within the next time period.
   - To set the connected load to start immediately, set the operating mode of the SMA radio-controlled socket to "Switch On" (see Section 9.3) and switch on the load.

   ☑ After the pond pump stops operating, the SMA radio-controlled socket switches to "Automatic - Switch Off" mode. The pond pump is restarted during the next time period.
4. If the pond pump is **not** to start during the next time period, set the SMA radio-controlled socket to "Switch Off" mode (see Section 9.3 "Setting the Operating Mode of the SMA Radio-Controlled Socket", page 57).

9.5 Load Control via the Miele@home System

9.5.1 The Miele@home System and SG-Ready

Miele@home is a system for the automatic control of SmartGrid-compatible (SG-Ready) Miele devices. The Sunny Home Manager can directly control SmartGrid-compatible Miele devices by communicating with a Miele@home Gateway and thereby optimize self-consumption. SmartGrid-compatible Miele devices can be distinguished by the SG-Ready symbol. SG-Ready is not available in all countries.

To switch the devices via the Sunny Home Manager, you have to activate the Miele@home support (see Section 9.5.2). All other settings are configured on the Miele devices.

Example: Behaviour of the Sunny Home Manager when switching devices

On the Miele devices, e.g. a washing machine, you set the time the wash cycle must be completed by. The Sunny Home Manager then determines the most economical time period to operate the washing machine and starts the machine automatically. This ensures that the washing machine is started on time so that the laundry is washed by the desired time.

9.5.2 Activating/Deactivating Miele@home Support for the Sunny Home Manager

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

☐ The Miele@home Gateway has a firmware version from 4.0.x.

1. Call up the device properties of the Sunny Home Manager (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].
   ☑ The menu for setting the device properties opens.
3. To activate the support, activate the **Active** checkbox in the "Miele@Home Support" area.
4. To deactivate the support, deactivate the **Active** checkbox in the "Miele@Home Support" area.
5. Select [Save].
   ☑ In the "Miele@Home Support" area, the exclamation mark is no longer displayed after a few minutes.
   ✖ In the "Miele@Home Support" area, is an exclamation mark displayed continuously?
   The setting could not yet be transferred to the Sunny Home Manager.
   - Rectify the fault (see Section 15 "Troubleshooting", page 92).

10 Plant Management

10.1 Adding Devices to the Plant/Replacing Devices

If a new *Bluetooth* device is added to your PV plant or if you replace a *Bluetooth* device with another one (device replacement), you must detect the new *Bluetooth* device with the Sunny Home Manager.

The configuration wizard in the Sunny Portal helps you detect new *Bluetooth* devices, add them to the Sunny Home Manager plant and replace *Bluetooth* devices.

If you would like to replace the Sunny Home Manager, you must use the plant setup wizard (see Section 10.3 "Replacing the Sunny Home Manager", page 63).

Requirements:

- ☐ The NetID of the PV plant is set on the new *Bluetooth* device.
- ☐ The standard password 1111 for the user group "Installer "or the plant password of the existing plant is set for the new *Bluetooth* device.
- ☐ The new *Bluetooth* device is in operation.
- ☐ The *Bluetooth* LED on the new inverter or *Bluetooth* Piggy-Back or *Bluetooth* Piggy-Back Offgrid in the new inverter lights up blue.
- ☐ The data request interval is set to "Automatic" (see Section 8.7).
- ☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

Device replacement: The old *Bluetooth* device must not be deleted, but deactivated

If you delete the *Bluetooth* device that you would like to replace from the Sunny Portal, all the data of the *Bluetooth* device will be permanently deleted.

- To receive the data of the old *Bluetooth* device in the Sunny Portal, do **not** delete the old *Bluetooth* device, but deactivate it (see Section 10.2).

1. Open **www.SunnyPortal.com**.
2. Log into Sunny Portal (see Section 4.2).
3. Select **Plant Selection > "My Sunny Home Manager Plant"** in the page and drop-down menu.
4. If you would like to replace a *Bluetooth* device in the Sunny Portal, deactivate the old *Bluetooth* device (see Section 10.2).
5. Select **Device Overview > Overview of New Devices** in the page and drop-down menu.
6. Select [Refresh devices]. The Sunny Home Manager then searches for new *Bluetooth* devices within range.

   ☑ After a maximum of 1 minute, all new *Bluetooth* devices within range are displayed.

   ✖ None or not all of the *Bluetooth* devices are displayed?

   An error has occurred.

   - Eliminate the error (see Section15).

7. To add a *Bluetooth* device, select ⊞ in the line of the *Bluetooth* device.
8. To replace a *Bluetooth* device, select ⇄ in the line of the new *Bluetooth* device.

☑ The Sunny Home Manager connects to the new *Bluetooth* device. Page 2 of the configuration wizard opens.

✖ Page 2 of the configuration wizard does not open, but the error message "Connection failed" is displayed?

A password other than 1111 or other than the plant password of the existing plant is set for the new *Bluetooth* device.

- Temporarily change the plant password of the existing plant to the password of the new *Bluetooth* device (see Section 14.3.2 "Changing the Plant Password", page 90).

9. Follow the configuration wizard instructions.

Replacing an inverter

It can take up to 20 minutes to replace an inverter using the configuration wizard.

☑ The new device is displayed under Configuration > Device Overview.

10. Just as you previously changed the plant password of the existing plant to the password of the new *Bluetooth* device, reset the old plant password (see Section 14.3.2 "Changing the Plant Password", page 90).

10.2 Activating/Deactivating Devices

In the following cases, you must deactivate *Bluetooth* devices in the Sunny Portal:

- You have removed a *Bluetooth* device from your PV plant

  or

- You no longer want to display a *Bluetooth* device in the Sunny Portal

  or

- You would like to replace the *Bluetooth* device in the Sunny Portal with another one (see Section 10.1 "Adding Devices to the Plant/Replacing Devices", page 61)

The data of the deactivated *Bluetooth* device remains in the Sunny Portal.

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select the device properties of the *Bluetooth* device (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].

   ☑ The menu for setting the device properties opens.
3. To deactivate the *Bluetooth* device in the Sunny Portal, deactivate the **Active** checkbox in the "Data Collection" area.
4. To activate the *Bluetooth* device in the Sunny Portal, activate the **Active** checkbox in the "Data Collection" area.
5. Select [Save].

10.3 Replacing the Sunny Home Manager

Requirements:

- ☐ The PV plant's NetID is set in the Sunny Home Manager (see the installation manual of the Sunny Home Manager).
- ☐ The new Sunny Home Manager is connected to the router (see the installation manual of the Sunny Home Manager).
- ☐ The new Sunny Home Manager is supplied with power (see the installation manual of the Sunny Home Manager).
- ☐ You are a "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Open **www.SunnyPortal.com** and select the **plant setup wizard**.

   or

   Open **www.SunnyPortal.com/Register**.

   ☑ The plant setup wizard.
2. Select [Next].

   ☑ The "User Registration" opens.
3. Activate the **I am already registered in Sunny Portal** checkbox.
4. Enter the e-mail address and the Sunny Portal password in the "E-mail Address" and "Password" text fields.
5. Select [Next].

   ☑ The "Select Plant" page opens.
6. Activate the "Add or Replace Devices" field.
7. Select ⇄ in the line of the Sunny Home Manager plant whose Sunny Home Manager you want to replace.
8. Select [Next].

   ☑ The "Select Devices" page opens.
9. In the "PIC" field, enter the serial number of the Sunny Home Manager. In the "RID" field, enter the registration ID of the Sunny Home Manager.

   Ascertaining the serial number and registration ID

   You can see the serial number and the registration ID at the following locations:
   - On the type label at the rear of the Sunny Home Manager
   - On the cover of the supplied CD

10. Select [Identify].
    ☑ The Sunny Portal checks whether the serial number and registration ID match the connected Sunny Home Manager.
    ✖ The plant setup wizard does not find the Sunny Home Manager with the serial number and registration ID?

    An error has occurred.
    - Rectify the fault (see Section 15 "Troubleshooting", page 92).
11. Select [Next].
12. Select [Finish].

10.4 Reassigning the Sunny Home Manager After Resetting the Sunny Home Manager Plant

Once you have completely reset the Sunny Home Manager (see the installation manual of the Sunny Home Manager), you must reassign the Sunny Home Manager to your Sunny Home Manager plant in the Sunny Portal.

Otherwise, the Sunny Portal will not accept any data from the Sunny Home Manager.

You have the following options for reassigning the Sunny Home Manager to your Sunny Home Manager plant:

- Reassigning the Sunny Home Manager via the Sunny Portal Access

  or

- Reassigning the Sunny Home Manager like a replacement device via the plant setup wizard (see Section 10.3 "Replacing the Sunny Home Manager", page 63)

Reassigning the Sunny Home Manager via the Sunny Portal Access

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Log into Sunny Portal (see Section 4.2).
2. Select **Plant Selection > "My Sunny Home Manager Plant"** in the page and drop-down menu.
   ☑ The following window opens: "Sunny Home Manager has been reset".
3. To delete the Sunny Home Manager and all the Sunny Home Manager data from the Sunny Portal, select [Delete From the Plant].
4. To continue using the Sunny Home Manager in this Sunny Home Manager plant, select [Use in this Plant].

10.5 Deleting a Device from the Sunny Portal

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

Device Data is irretrievably deleted

If you delete a device, all the data of that device is irretrievably deleted.

- Check whether it is sufficient to deactivate the device (see Section 10.2 "Activating/ Deactivating Devices", page 62).

1. Select the device properties of the *Bluetooth* device (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].
3. Select [Delete].
   ☑ A window containing a security question opens.
4. To irretrievably delete the device, select [Delete].

10.6 Deleting the Sunny Home Manager Plant

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

If you delete the Sunny Home Manager plant, all plants and their data are deleted permanently.

1. Select **Configuration > Plant Characteristics** in the page and drop-down menu.
2. Select [Edit].
3. Select [Irretrievably Delete Plant] in the "Plant Data" area.
   ☑ A security question opens.
4. Select [Yes] to permanently delete the Sunny Home Manager plant.

Assigning the Sunny Home Manager to another plant

To assign the Sunny Home Manager to another plant, you must completely reset the Sunny Home Manager (see the installation manual of the Sunny Home Manager).

11 Plant Monitoring

11.1 Plant Monitoring Options

Monitoring:	Option in Sunny Portal	See
Events of the plant	**System Logbook** You can view messages regarding events of your PV plant.	Section 11.2
	Report Configuration You receive e-mails with the events of your plant.	Section 11.3
Yield, power, and CO_2 savings	**Report Configuration** You receive e-mails with the data of your PV plant.	
Inverter yields	**Inverter Comparison** You will be notified by e-mail if the specific yield of an inverter is outside the set tolerance range.	Section 11.5
Communication between the Sunny Home Manager and the Sunny Portal	**Communication Monitoring** You are notified by e-mail if the Sunny Home Manager does not communicate with the Sunny Portal within the set time.	Section 11.4

11.2 System Logbook

11.2.1 Calling up and Filtering Messages

Messages help you detect disturbances of your PV plant, for example. The following message types are available:

- Info
- Warning
- Disturbance
- Fault

Requirements:

☐ You are a "Standard User", "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

Calling Up Messages

- Select **System Logbook** in the page and drop-down menu.

Filtering Messages

You can filter messages in the system logbook to only call up certain messages.

1. Select **System Logbook** in the page and drop-down menu.
2. To filter messages, set one or more of the following filters:

Input Field or Drop-down List	Explanation
"Go to"	• Enter the date for the messages you would like to display. Tip: Click the calendar icon and select a date in the calendar.
"Status"	• To display all unconfirmed messages, select **Not Confirmed**. • To display all confirmed messages, select **Confirmed**. • To display all messages, select **All**.
"Plant/Devices"	• To display the messages of the Sunny Portal, the Sunny Home Manager plant and the devices, select **All**. • To display Sunny Portal messages, select **Portal**. • To display messages of the Sunny Home Manager plant, select **Plant**. • To display messages of specific devices, select the respective device (e.g. **SB 4200TL**).
"Number per Page"	• Select the number of messages that you would like to display.
"Type"	• To display messages of a specific type, activate the desired checkbox **Info**, **Warning**, **Disturbance**, or **Error**.

11.2.2 Confirming Messages

Requirements:

☐ You are a "Standard User", "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

You can confirm messages in order to mark them as read. This allows you to differentiate between messages that you have already read and new messages.

1. Select **System Logbook** in the page and drop-down menu.
2. To individually confirm messages, select ✖ in the line of the message and in the "Confirmed" column.
3. To confirm several messages, mark the desired messages:
   - To mark individual messages, activate the relevant checkboxes on the left of the messages.
   - To mark all messages, select the **Select All** checkbox.
4. Select [Execute].

11.3 Reports

11.3.1 Report Overview

Reports are documents containing plant data or PV plant events. You can have the reports sent as e-mail by the Sunny Portal.

You can have the e-mails sent by your mobile service provider as a text message or have them forwarded as a text message from your e-mail account.

Report	Possible Content
"Daily Info Report"	• Daily yield (kWh) • Today's maximum power • CO_2 savings (kg)
"Monthly Info Report"	• Monthly yield (kWh) • Monthly maximum power • Monthly CO_2 savings
"Event Report"	• Information • Warnings • Disturbances • Fault

11.3.2 Configuring Reports

The following report types are available:

- "Info Reports": contain plant data and are sent to you regularly.
- "Event Reports": Inform you if certain plant events occur.

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

Configuring "Daily Info Reports"/"Monthly Info Reports"

You can configure 3 "Daily Info Reports" and 3 "Monthly Info Reports" each with different content.

The Sunny Portal sends you the "Daily Info Reports" when it has processed all the data from the pervious day and the "Monthly Info Report" at the end of the month.

Requirements:

☐ The CO_2 savings are entered (see Section 12.11 "Entering the Value of CO_2 Savings", page 83).

1. Select **Configuration > Report Configuration** in the page and drop-down menu.

2. In the "Report Configuration" drop-down list, select a **Daily Info Report** or a **Monthly Info Report**.
3. Select [Edit].
4. Configure the report:

Range	Explanation
"Activate Report"	• Activate the **Active** checkbox.
"Recipient"	• Enter the recipient's/recipients' e-mail address(es) in the "E-mail Address(es)" text field. If you enter several e-mail addresses, please separate these by commas.
"Content"	• In the "Select Channel(s)" area, activate the content that is to be displayed in the e-mail. • In the "Send Report As" area, select the format option in which the Sunny Portal is to send the report. • If the Sunny Portal is to send a Sunny Portal page along with the report, select a page in the drop-down list in the "Portal Page to Be Sent" area. • If the Sunny Portal is not to send a Sunny Portal page along with the report, select **Send No Page**.

5. To send a test report to the stated e-mail address, select [Send Test Report].
6. Select [Save].

Configuring Event Reports

You can configure 3 event reports each with different content.

The Sunny Portal sends you the event reports at the times you set.

1. Select **Configuration > Report Configuration** in the page and drop-down menu.
2. In the "Report Configuration" drop-down list, select an "Event Report".
3. Select [Edit].
4. Configure the report:

Range	Explanation
"Activate Report"	• Activate the **Active** checkbox.
"Recipient"	• Enter the recipient's/recipients' e-mail address(es) in the "E-mail Address(es)" text field. If you enter several e-mail addresses, please separate these by commas.

Range	Explanation
"Interval"	• To receive an e-mail along with the event report hourly, activate the **Hourly** option. • To receive one daily e-mail with the event report, activate the option **Daily** and, in the drop-down list, select the time you would like to receive the e-mail.
"Content"	You can select up to 4 Sunny Portal and Sunny Home Manager plant event types: **Information**, **Warnings**, **Failures**, **Faults**. • Activate the content that is to be displayed in the e-mail. • In the "Send Report As" area, select the format option in which the Sunny Portal is to send the report. • In the "Limit Messages in One Report" area, use the drop-down list to select the maximum number of messages to be displayed in the e-mail. • If you wish to send reports even if there are no new events, activate **Send empty reports if no new events are available**.

5. To send a test report to the stated e-mail address, select [Send Test Report].
6. Select [Save].

11.3.3 Creating a Report for a Specific Date

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

You can create a report for a specific date in the past.

1. Select **Configuration > Report Configuration** in the page and drop-down menu.
2. Select the desired report in the "Report Configuration" drop-down list.
3. Enter the date for which you would like to create a report in the "Regenerate Report Manually" area in the "Report Date" text field. Tip: Click the calendar icon and select a date in the calendar.
4. Select [Generate].
   ☑ A message that the report has been successfully sent is displayed.

11.4 Setting Communication Monitoring

You can set the time after which the Sunny Portal is to report an error and notify you by e-mail if the Sunny Home Manager does not communicate with the Sunny Portal.

The time after which the Sunny Portal displays the error and notifies you by e-mail is defined by the following settings:

- "Alerts"
- "Data Request Interval" (see Section 8.7 "Setting the Data Request Interval", page 45)

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Plant Monitoring** in the page and drop-down menu.
2. In the "Communication Monitoring" area select [Settings].
   ☑ The "Configuration Communication Monitoring" page opens.
3. Click the scroll bar and holding the left mouse button pressed, set how fast the Sunny Portal is to report an error and notify you by e-mail:

"Alerts"	"Data Request Interval"	Time
"Off"	"Automatic"	The communication monitoring is off.
	"Hourly"	
	"Daily"	
"Generous"	"Automatic"	3:15 h
	"Hourly"	4:00 h
	"Daily"	27:00 h
"Average"	"Automatic"	1:15 h
	"Hourly"	2:00 h
	"Daily"	25:00 h
"Stringent"	"Automatic"	00:30 h
	"Hourly"	1:15 h
	"Daily"	24:15 h

4. Enter the recipient's/recipients' e-mail address(es) in the "Recipient" text field. If you enter several e-mail addresses, please separate these by commas.
5. Select [Save].

11.5 Setting the Inverter Comparison

Sunny Portal can recognize possible yield losses via the inverter comparison. If the specific yield of an inverter deviates strongly from the average yield of all inverters, Sunny Portal can inform you via e-mail.

Requirements:

☐ There are at least 2 inverters in the PV plant.

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Plant Monitoring** in the page and drop-down menu.
2. In the "Inverter Comparison" area, select [Settings].
   ☑ The "Configuration of Inverter Comparison" page opens.
3. Enter the recipient's e-mail address in the "Recipient" text field. If you enter several e-mail addresses, please separate these by commas.
4. **Generator capacity**

   The generator capacity is preset in the "Generator Capacity [kWp]" text field. The Sunny Portal calculates the generator capacity based on the nominal power of each inverter. You can also enter the generator capacity manually or have Sunny Portal calculate it by entering information on the strings (see Section 8.10 "Entering the Generator Capacity", page 48).
5. In the "Tolerance" text field, enter the permissible tolerance for the inverter's specific yield. This will also set the point from which the deviation of inverter specific yield is sufficient to trigger e-mail notification by Sunny Portal.
6. To select an inverter for the inverter comparison, activate the "Monitoring" checkbox in the line of the inverter.
7. Select [Save].

12 Plant Settings

12.1 Entering the String Properties

A string describes a group of series-connected PV modules. Normally, a PV plant is made up of multiple strings. Each string has specific properties, such as deviation to south (azimuth) or the roof's tilt angle.

The Sunny Home Manager's yield forecasts play an important role in controlling loads. If you enter the string properties of your PV plant, the Sunny Home Manager produces extremely precise yield forecasts.

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Call up the inverter properties (see Section 8.2 "Calling Up the Properties of a Device", page 42).
2. Select [Edit].
   ☑ The menu for setting the device properties opens.
3. Select [Add string] to add a new string.
4. To copy an existing string, select in the string line and the "Copy" column.
5. In the line of the copied string, select in the "Edit" column.
   ☑ The menu to set the string opens.
6. Enter the string's properties:

Input field or drop-down list	Explanation
"Description"	Name of the string, e.g. **String 1**
"Manufacturer"	PV module manufacturer
"Module Type"	Depending on the selected manufacturer, various module types are displayed in the drop-down list.
"Module Power"	These values are entered automatically after you select the module type. You can change the values using or the keyboard's arrow keys.
"Module Surface"	
"Efficiency"	
"Number of Modules"	Number of modules that a string contains

Input field or drop-down list	Explanation
"Azimuth"	The azimuth angle indicates, in degrees, the amount by which the module surfaces deviate from a southern orientation. • In the text field, enter the number of degrees by which the module surfaces deviate from a southern orientation. Enter a negative value (e.g. – **20**) for a deviation to the east and a positive value (e.g. **20**) for a deviation to the west. • If the module surfaces track the sun automatically, activate the "Tracking" checkbox.
"Tilt Angle"	The tilt angle indicates, in degrees, the amount by which the module surfaces deviate from the horizontal. For some plants, the module surfaces are ideally aligned according to the latitude. In Germany, the optimum orientation is 30 degrees from the horizontal. • In the text field, enter the number of degrees by which the module surfaces deviate from the horizontal. • If the module surfaces are ideally aligned according to the latitude, activate the "Optimized" checkbox.
"Description"	• Enter any comments.

7. Select [Submit].
8. Select [Save].

12.2 Changing Plant Data

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Plant Data** tab.
3. Select [Edit].
   ☑ The setting menu for the plant data opens.
4. Change the desired plant data.
5. Select [Save].

12.3 Changing the Plant Name

You can change the plant name that you entered when you registered the Sunny Home Manager plant.

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

Plant name requirements:

☐ The plant name may consist of a maximum of 30 characters.

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Plant Data** tab.
3. Select [Edit].
   ☑ The setting menu for the plant data opens.
4. Enter the desired plant name in the "Name" text field.
5. Select [Save].

12.4 Setting the Plant Power

12.4.1 Manually Entering the Plant Power

The plant power is the sum of the power of all PV modules. You can obtain the plant power specifications from your installer.

The plant power is required in order to display the following data:

- Specific plant yield
- Average expected yield
- Performance ratio

Plant Power is required for limiting of the active power feed-in

You must enter the plant power correctly to ensure limiting of the active power feed-in to the correct value (see Section 12.9 "Configuring the Limiting of the Active Power Feed-In", page 81). If there are changes to the installed plant power, you have to adjust this value.

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Plant Data** tab.
3. Select [Edit].
   ☑ The setting menu for the plant data opens.
4. In the "Power" area, set the plant power in the "Plant Power" text field.
5. To set the manufacturer of the PV modules, select the manufacturer in the "Manufacturer" drop-down list.
6. To set the module types, select the module types in the "Module Type" drop-down list.
7. Select [Save].

12.4.2 Calculating the Plant Power

The plant power is the sum of the power of all PV modules. It can be calculated directly from the data in the device properties.

The plant power is required in order to display the following data:

- Specific plant yield
- Average expected yield
- Performance ratio

Requirements:

☐ The generator capacity for all inverters is entered (see Section 8.10 "Entering the Generator Capacity", page 48).

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Plant Data** tab.
3. Select [Edit].
   ☑ The setting menu for the plant data opens.
4. In the "Power" area, activate the **Calculate Plant Power from Device Properties** checkbox.
   ☑ The calculated plant power is displayed.
5. Select [Save].

12.5 Changing the Plant Description

You can enter important features of the plant in the description. The text is displayed on the "Plant Profile" page.

The editor only supports text and does not support typography with HTML tags.

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Plant Data** tab.
3. Select [Edit].
   ☑ The setting menu for the plant data opens.
4. Enter a description in the "Description" area.
5. Select [Save].

12.6 Changing Operator Data

The operator is a private individual or legal entity who owns PV plants for business purposes, for example. The operator can farm out use of the PV plant without necessarily being the user himself.

The name of the operator is displayed on the "Plant Profile" page.

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Operator** tab.
3. Select [Edit].
   ☑ The setting menu for the operator data opens.
4. Enter the operator data.
5. Select [Save].

12.7 Changing/Deleting the Plant Image

The plant image is the image in the page and drop-down menu next to the "Name of your Sunny Home Manager Plant" menu item.

Figure 5: Plant image

You can replace the standard plant image with a user-defined plant image. The user-defined plant image is also displayed on the following pages:

- "Plant Profile" page
- If pages for Sunny Portal are released, it is also displayed on the list of released plants on the www.SunnyPortal.com homepage.

You can save several images in a gallery in Sunny Portal. This allows you to easily change the plant image and access your images from different computers.

Changing the Plant Image

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

Plant image requirements:

☐ Maximum image size: 500 kB

☐ Possible image formats: JPG, PNG, GIF

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Plant Data** tab.
3. Select [Edit].
   ☑ The setting menu for the plant data opens.
4. Select [Load Image] in the "Plant Image" area.
5. Select the desired image from one of your directories.
6. Select [Open].
7. To change the plant image size, move the grey squares with the mouse.
8. To move the image section, click the image section and move it while holding the left mouse button pressed.
9. Select [Save].

10. To save an image in the gallery, upload the image to the gallery:
    - Select [Select from the gallery].
    - Select **Upload**.
    - Select [Browse].
    - Select the desired image from one of your directories.
    - Select [Upload selected file].
    - Select ✖.

    ☑ The image is saved in the gallery.
11. To upload an image from the gallery as the plant image, select [Select from the gallery].
12. Double-click the desired image.
13. Select [Save].

Deleting the User-Defined Plant Image

If you delete the user-defined plant image, Sunny Portal displays the default plant image.

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Plant Data** tab.
3. Select [Edit].

   ☑ The setting menu for the plant data opens.
4. Select [No Plant Image] in the "Plant Image" area.
5. Select [Save].

12.8 Feed-In Compensation, Self-Consumption Tariff and Electricity Tariff

The feed-in compensation and electricity tariff affect the following components:

- Recommended actions for the "Forecast and Recommended Action" diagram on the "Current Status and Forecast" page
- Load control via SMA radio-controlled sockets

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Parameters** tab.
3. Select [Edit].

   ☑ The setting menu for parameters opens.
4. Enter the feed-in tariff per kWh in the "Feed-in Compensation" area in the "Feed-in Tariff" text field. Also select the desired currency in the accompanying drop-down list.
5. In the "Plant with Self-Consumption" text field, select whether you consume self-generated PV energy in your household (self-consumption). If you select "Yes" (default setting), the self-consumption of the household is taken into consideration in the load control and recommended actions.
6. If you receive compensation for self-consumption, enter the self-consumption tariff in the "Self-consumption Tariff" text field.
7. If you do not receive compensation for self-consumption, enter **0** in the "Self-consumption Tariff" text field.
8. Enter the time for which the electricity tariff applies in the "Electricity Tariff" area in the "From" and "To" input fields.
9. Enter the electricity tariff that applies to the entered time in the "Price" input field.
10. If the electricity tariff only applies to specific weekdays, activate the checkboxes with the respective weekdays.
11. If the electricity tariff applies to each weekday, activate all checkboxes with the weekdays.
12. To enter additional electricity tariffs, select ⊞ and enter the data.
13. Select [Save].

12.9 Configuring the Limiting of the Active Power Feed-In

NOTICE

Responsibility of the plant operator for limiting of the active power feed-in

The plant operator is responsible for the correctness of information on the limiting of the active power feed-in and plant power.

- Set the limiting of the active power feed-in required by the network operator. If necessary, contact your network operator.
- Provide correct information on the plant power. If you extend the plant, adjust the value for the plant power.

Requirements:

☐ The *Bluetooth* link between all devices of the plant must be good. You can check the connection quality with Sunny Explorer (see Sunny Explorer user manual). To improve the wireless connection between the *Bluetooth* devices, use the SMA radio-controlled socket as a repeater if necessary.

☐ The feed-in meter must comply with the requirements (see Sunny Home Manager installation manual).

☐ With all inverters, the parameter "Operating Mode Active Power" must be set to the value **Active Power Limitation P via Plant Control** (see Sunny Explorer user manual).

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Parameters** tab.
3. Select [Edit].
   ☑ The setting menu for parameters opens.
4. In the "Limiting of the Active Power Feed-In", select the applicable option:
   - If limiting of the active power feed-in is not required for your plant, select **No Limiting of the Active Power Feed-in** (default setting).
   - If the network operator requires limiting to a maximum active power in kW, select the option **Maximum xx kW** and enter the maximum permitted active power in kW.
   - If the network operator requires limiting to a percentage of the plant power, select the option **Maximum xx % of Plant Power** and enter the required percentage.

Testing the Limiting of the Active Power Feed-in

Before you enter the value given by the network operator, you can test whether the limiting of the active power feed-in works properly in your plant.

- To do this, first enter a lower threshold, but at least 10% of the plant power so that the Sunny Home Manager must immediately initiate limiting of the active power feed-in.

5. Select [Save].
   ☑ The data is transferred. This can take up to 5 minutes.
6. To display the active power limitation, select **Energy Balance > Current** or **Energy Balance > Day**.
   ☑ In the "Energy Balance - Current" and "Energy Balance - Day", the specified limiting of the active power feed-in is displayed as a red line. If the PV production exceeds the specified threshold, a blue surface is shown above the red line as a maximum, and this corresponds to the current self-consumption.

12.10 Setting the Optimization Target

The optimization target defines which target you are pursuing with your Sunny Home Manager plant:

- Achieve the highest self-consumption possible (ecological)
- Save the most costs possible (economical)

The optimization target affects the following components:

- Load control via SMA radio-controlled sockets
- Recommended actions for the "Forecast and Recommended Action" diagram on the "Current Status and Forecast" page

Availability of forecast data

The calculation of the recommended actions for the highest possible self-consumption (ecological) is not possible in all countries.

Requirements:

☐ The feed-in compensation, self-consumption tariff and electricity tariff are entered (see Section 12.8).

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Parameters** tab.
3. Select [Edit].
   ☑ The setting menu for parameters opens.
4. In the "Optimization Target" area, click the scroll bar and holding the left mouse button pressed, set the optimization target:
   - To achieve the highest self-consumption possible, move the scroll bar towards "ecological".
   - To save the most costs possible, move the scroll bar towards "economical".
5. Select [Save].

12.11 Entering the Value of CO_2 Savings

The CO_2 factor indicates how much CO_2 is produced during the power generation of one kilowatt hour. The CO_2 factor can vary depending on the network operator. You can find out the level of the CO_2 factor for one kilowatt hour of current by contacting your network operator

Sunny Portal can use the CO_2 factor value to calculate how much CO_2 was saved due to the power generation of your PV plant.

You can view the value of CO_2 savings on the following pages:

- "Plant Profile" page
- "Daily Info Report" or "Monthly Info Report" (see Section 11.3.2 "Configuring Reports", page 68).

Requirements:

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Parameters** tab.
3. Select [Edit].

   ☑ The setting menu for parameters opens.
4. In the "Factor" area, enter the CO_2 factor in the text field or click the scroll bar and holding the left mouse button pressed, set the CO_2 factor.
5. Select [Save].

12.12 Calculating the Predicted Annual Yield

Sunny Portal can display in a table how the predicted annual yield of your PV plant is likely to be distributed throughout the months of a year.

The predicted annual yield of the PV plant is calculated from the specific annual yield (kWh/kWp) at the PV plant location multiplied by the plant power.

You can obtain the specific annual yield for your PV plant location from irradiation maps. Local conditions such as shading of your PV plant or the plant orientation are not taken into account by Sunny Portal.

Requirements:

☐ The plant power is set (see Section 12.4).

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Parameters** tab.
3. Select [Edit].
   ☑ The setting menu for parameters opens.
4. In the "Yield Expectations" area, enter the specific annual yield in the "Specific Annual Yield" text field.
   ☑ The predicted annual yield is displayed in the "Predicted Annual Yield" field.
5. To allow the average expected yield and the monthly distribution to be configured on the "Annual Comparison" page, activate the **The monthly distribution can be configured in the diagrams** checkbox.
6. Select [Save].

12.13 Setting the Monthly Distribution of the Predicted Annual Yield

The monthly distribution shows how the predicted annual yield is distributed throughout the months of the year.

You have the following options:

- Allowing Sunny Portal to suggest the monthly distribution
- Entering the monthly distribution manually

Allowing Sunny Portal to Suggest the Monthly Distribution

Requirements:

☐ The plant location is entered (see Section 12.2 "Changing Plant Data", page 74).

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Parameters** tab.
3. Select [Edit].
   ☑ The setting menu for parameters opens.
4. Select [Suggest a Monthly Distribution] in the "Yield Expectations" area.
   ☑ The monthly distribution is displayed in the table with the months.

5. To allow the average expected yield and the monthly distribution to be displayed in the diagrams on the "Annual Comparison" and "Energy and Power" pages, activate the **Display the monthly distribution in the yearly comparison, as well as energy and power** checkbox.
6. To allow the average expected yield to be configured on the "Annual Comparison" and "Energy and Power" pages, activate the **The monthly distribution can be configured in the diagrams** checkbox.

Entering the Monthly Distribution Manually

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Parameters** tab.
3. Select [Edit].
   ☑ The setting menu for parameters opens.
4. In the "Yield Expectations" area, enter the values in the "In %" text fields in the table with the months.
5. To allow the predicted annual yield and the monthly distribution to be displayed in the diagrams on the "Annual Comparison" and "Energy and Power" pages, activate the **Display the monthly distribution in the yearly comparison, as well as energy and power** checkbox.
6. To allow the predicted annual yield to be configured on the "Annual Comparison" and "Energy and Power" pages, activate the **The monthly distribution can be configured in the diagrams** checkbox.
7. Select [Save].

12.14 Editing your Data Releases

You can set whether you would like to provide the "www.sonnenertrag.eu" PV database with your plant data.

1. Select **Configuration > Plant Properties** in the page and drop-down menu.
2. Select the **Data Releases** tab.
3. Select [Edit].
   ☑ The setting menu for the data releases opens.
4. Activate or deactivate the data releases checkbox.
5. Select [Save].

13 User Management

13.1 Users and User Rights

If you have "Plant Administrator" rights, you can create additional users in the Sunny Portal so they can access your Sunny Portal plant. You can assign various roles to users. Roles differ in the rights the users have in your Sunny Portal plant. The following roles are possible:

- "Guest"
- "Standard User"
- "Installer"
- "Plant Administrator"

Rights	**Role**			
	"Guest"	"Standard User"	"Installer"	"Plant Administrator"
Login	✓	✓	✓	✓
View pages	✓	✓	✓	✓
Change and delete pages	-	-	✓	✓
Release pages for viewing in Sunny Portal and publish pages	-	-	✓	✓
Save diagram data	-	✓	✓	✓
View and change user information	✓	✓	✓	✓
Change Sunny Portal password	-	✓	✓	✓
Change the plant password	-	-	✓	✓
View device properties	-	✓	✓	✓
View plant properties	-	✓	✓	✓
Change plant properties	-	-	✓	✓
View report configuration	-	✓	✓	✓
Change report configuration	-	-	✓	✓
Change device properties	-	-	✓	✓
Configure SMA radio-controlled sockets	-	-	✓	✓
Set the operating mode of SMA radio-controlled sockets using the Sunny Portal	-	-	✓	✓
Replace devices	-	-	✓	✓
Replace the Sunny Home Manager	-	-	-	✓

Rights	Role			
	"Guest"	"Standard User"	"Installer"	"Plant Administrator"
Delete the devices	-	-	✓	✓
Delete the Sunny Home Manager	-	-	✓	✓
Delete the Sunny Home Manager Plant	-	-	✓	✓
Reassign the Sunny Home Manager to the plant	-	-	✓	✓
Set communication monitoring	-	-	✓	✓
Set inverter comparison	-	-	✓	✓
View system logbook and confirm entries	-	✓	✓	✓
Import data	-	-	✓	✓
Ascertain the software package version	-	✓	✓	✓
View user management	-	-	-	✓
Create and delete users and assign roles	-	-	-	✓

13.2 Creating a New User

Requirements:

☐ You are a "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86)).

1. Select **Configuration > User Management** in the page and drop-down menu.
2. Select [New User].
3. Enter the new user's e-mail address in the "E-mail Address" text field.
4. Activate the desired role option in the "Roles" area.
5. Select [Save].
   ☑ The new user receives an e-mail with the access data.

13.3 Deleting a User

Requirements:

☐ You are a "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86)).

1. Select **Configuration > User Management** in the page and drop-down menu.
2. Select in the line of the user and the "Delete" column.
3. Confirm the security question with [Yes].

13.4 Changing User Rights

Requirements:

☐ You are a "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

1. Select **Configuration > User Management** in the page and drop-down menu.
2. Select in the line of the user and the "Edit" column.
   ☑ The "E-mail Address" and "Roles" areas open.
3. Activate the desired role option in the "Roles" area.
4. Select [Save].
   ☑ The user rights are changed for the Sunny Home Manager plant.

13.5 Changing User Information

Each user can enter user information. User information includes the name and the address, for example.

1. Select **User Info/Logout > User Information** in the page and drop-down menu.
2. Select [Edit].
   ☑ The setting menu for user information opens.
3. Enter the user information.
4. Select [Save].

14 Password Information

14.1 Selecting Secure Passwords

You can increase the security of your password as follows:

- Select passwords that contain at least eight characters.
- Use combinations of upper and lowercase letters, special characters and numbers.
- Do not use names or common words (e.g. "dog", "cat", "house").
- Avoid using words that have any personal relevance to you such as the names of persons or pets, personnel numbers, identification numbers, dates of birth or car license plates.
- Do not repeat names or words (e.g. "househouse" or "catcat").
- Do not combine numbers or letters in the same order as they appear on your keyboard (e.g. "12345", "qwerty").

14.2 Required Passwords

14.2.1 Sunny Portal Password

You can log into Sunny Portal with the Sunny Portal password.

If you register a PV plant in Sunny Portal, you must specify a Sunny Portal password during registration.

If you have created a new user in Sunny Portal (see Section 13.2), you receive an e-mail with a Sunny Portal password.

You can change the Sunny Portal password (see Section 14.3.1)

14.2.2 Plant Password

All *Bluetooth* devices with the same password and the same NetID form a plant. Therefore, any password that is the same for all *Bluetooth* devices of a plant is referred to as the plant password.

You can only access all your PV plant's *Bluetooth* devices using your communication product (e.g. Sunny Explorer, Sunny Home Manager) if all *Bluetooth* devices have the same password.

You must define the plant password when you register the Sunny Home Manager plant. The plant password that you defined when you registered the Sunny Home Manager is the "Installer" user group password. You can change the plant password (see Section 14.3.2).

14.3 Changing Passwords

14.3.1 Changing the Sunny Portal Password

Sunny Portal password requirements:

☐ The Sunny Portal password may consist of a maximum of eight characters.

☐ You are a "Standard User", "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

The following special characters are permitted:

- ! $ % & / ( ) = ? + − . ; : _ < > #
- Space

1. Select **User Info/Logout > User Information** in the page and drop-down menu.
2. Select **If you want to change your password, please click here** on the "User Information" tab.
3. Enter the old and the new Sunny Portal passwords in the designated text fields.
4. Select [Save].

14.3.2 Changing the Plant Password

Requirements:

☐ The *Bluetooth* LED on the inverter or *Bluetooth* Piggy-Back or *Bluetooth* Piggy-Back Offgrid is glowing blue.

☐ You are an "Installer" or "Plant Administrator" (see Section 13.1 "Users and User Rights", page 86).

Plant Password Requirements:

☐ The plant password can be a maximum of 12 characters.

The following special characters are permitted:

- ? _ ! -

1. Call up the device properties of the Sunny Home Manager (see Section 8.10 "Entering the Generator Capacity", page 48).
2. Select [Edit].
   ☑ The menu for setting the device properties opens.
3. Enter a new password in the "Plant Password" text field,
4. Enter the new password again in the "Repeat" text field.
5. Select [Save].
   ☑ The Sunny Home Manager changes the password for all *Bluetooth* devices.

14.4 Lost Password

14.4.1 Forgotten Sunny Portal password

1. Open **www.SunnyPortal.com**.
2. Select **Forgotten Password?** in the "Login" area.
3. Enter your e-mail address in the "E-mail" text field.
4. Select [Generate New Password].
   ☑ You will receive an e-mail with a new password.
5. Change the assigned password (see Section 14.3.1 "Changing the Sunny Portal Password", page 90).

14.4.2 Forgotten Password

You can activate each *Bluetooth* device with a personal unlocking key (PUK) (see the Sunny Explorer help).

15 Troubleshooting

Problem	Cause and corrective measures
The plant setup wizard does not find the Sunny Home Manager with the entered serial number and registration ID.	You may have entered the serial number or the registration ID incorrectly. **Corrective measures:** • Make sure that the entries are correct.
	It is possible that the Sunny Home Manager is not correctly connected to the router. **Corrective measures:** • Make sure that the Sunny Home Manager is connected to the router correctly (see the installation manual of the Sunny Home Manager).
	The Sunny Home Manager may not be able to establish a connection to the Sunny Portal, because DHCP is not activated on your router. **or** The Sunny Home Manager may not be able to establish a connection to the Sunny Portal, because there is a proxy server in your network. **Corrective measures:** • Establish the connection to the Sunny Portal using the Sunny Home Manager wizard (see the installation manual of the Sunny Home Manager).
	The Sunny Home Manager is assigned to a different plant in the Sunny Portal, e.g. if you have purchased a used Sunny Home Manager. **Corrective measures:** • Completely reset the Sunny Home Manager (see the installation manual of the Sunny Home Manager). • If the problem continues, contact the previous owner and ask him to delete the Sunny Home Manager in the Sunny Portal. **or** • Contact the SMA Service Line.

Problem	Cause and corrective measures
The Sunny Home Manager does not detect any or not all new *Bluetooth* devices.	The NetID of your PV plant may not be set for the new *Bluetooth* devices. **Corrective measures:** • Make sure that the NetID of your PV plant is set for the new *Bluetooth* devices. • Make sure that NetID "1" is **not** set for the new *Bluetooth* devices and on the Sunny Home Manager.
	The wireless connection of certain *Bluetooth* devices may be disturbed by ambient conditions. **Corrective measures:** • Make sure that the connection quality for the *Bluetooth* devices is at least "good" (see the manual of the *Bluetooth* devices). • If the connection quality is not at least "good", use a *Bluetooth* repeater or SMA radio-controlled socket. This allows you to extend the wireless range of your *Bluetooth* network.
	Inverters with *Bluetooth* Piggy-Back shut down overnight. Therefore, the Sunny Home Manager cannot establish a connection to these inverters at this time. **Corrective measures:** • Register within the operating time of the inverter.
	The *Bluetooth* devices of your PV plant may not be operating. Therefore, the Sunny Home Manager cannot establish a connection to these devices. **Corrective measures:** • Commission the *Bluetooth* devices.
The "Energy Balance" page is not displayed.	The "Energy Balance" page is only displayed if at least one consumption meter or one feed-in meter is connected to the Sunny Home Manager. **Corrective measures:** • Connect at least 1 consumption meter or 1 feed-in meter to the Sunny Home Manager and configure them (see the installation manual of the Sunny Home Manager).

Problem	Cause and corrective measures
The "Current" tab on the "Energy Balance" and "Load Balance and Control" pages is not displayed.	The tab is only displayed if the data request interval is set to "Automatic". **Corrective measures:** • Set the data request interval to "Automatic" (see Section 8.7 "Setting the Data Request Interval", page 45).
The diagrams are empty or incomplete.	No energy meters or not all energy meters are connected to the Sunny Home Manager or they are not configured. **Corrective measures:** • Connect the energy meters to the Sunny Home Manager and configure them (see the installation manual of the Sunny Home Manager).
	The Sunny Portal cannot receive any data from the Sunny Home Manager. **Corrective measures:** • Make sure that the connection between the Sunny Home Manager and the Sunny Portal is established (see the installation manual of the Sunny Home Manager).
An exclamation mark will be displayed continuously once the parameters have been changed.	The Sunny Portal could not transfer the parameters to the Sunny Home Manager. **Corrective measures:** • Make sure that the connection between the Sunny Home Manager and the Sunny Portal is established (see the installation manual of the Sunny Home Manager).
The Sunny Portal displays unrealistic data.	The energy meters are connected to the wrong connection ports of the Sunny Home Manager. **Corrective measures:** • Make sure that each energy meter is connected to the connection port that is assigned to the energy meter (see the installation manual of the Sunny Home Manager).
In the "Energy Balance - Current" and "Energy Balance - Day" diagrams, unrealistic values are displayed for feed-in and purchased electricity.	Energy meters with an S0 interface have to output balanced values to the S0 interface via the line conductors. **Corrective measures:** • Make sure that the energy meter with an S0 interface outputs balanced values via the line conductors. If necessary, ask the manufacturer of the energy meter.

Problem	Cause and corrective measures
The Sunny Portal does not display a weather forecast in the "Forecast and Recommended Action" diagram.	It can take up to 24 hours after the Sunny Home Manager has been initially registered in the Sunny Portal until the weather forecast is displayed. **Corrective measures:** • After 24 hours, check again to see whether the weather forecast is displayed. • If after 24 hours there is still no weather forecast displayed, contact the SMA Service Line.
The animated graphic on the "Current Status and Forecast" page does not display any current data.	The receipt of current data of the Sunny Home Manager is only possible if the data request interval is set to "Automatic". • Set the data request interval to "Automatic" (see Section 8.7 "Setting the Data Request Interval", page 45).
	There may not be a PV production meter connected to the Sunny Home Manager and too many data requesting devices may access the devices of your PV plant at the same time (e.g. Sunny Beam and several computers with Sunny Explorer). **Corrective measures:** • Make sure that in addition to the Sunny Home Manager only a maximum of 2 other data requesting devices access your PV plant at the same time.
No data is displayed on the "Current" tab located on the "Load Balance and Control" page.	Too many data capture devices may have access to the devices of your PV plant at the same time (e.g. Sunny Beam and several computers with Sunny Explorer). **Corrective measures:** • Make sure that in addition to the Sunny Home Manager only a maximum of 2 other data requesting devices access your PV plant at the same time.
No data is displayed on the "Current" tab located on the "Energy Balance" page.	There may not be a PV production meter connected to the Sunny Home Manager and too many data requesting devices may access the devices of your PV plant at the same time (e.g. Sunny Beam and several computers with Sunny Explorer). **Corrective measures:** • Make sure that in addition to the Sunny Home Manager only a maximum of 2 other data requesting devices access your PV plant at the same time.

Problem	Cause and corrective measures
After the device is replaced using the configuration wizard, the current parameters are not displayed in the parameter list.	The new parameters may have not yet been transferred to the Sunny Portal. **Corrective measures:** • Call up the parameter list again later.
When configuring the SMA radio-controlled sockets, the time period cannot be set as desired.	The time period must be at least as long as a) the maximum program operating time **or** b) the sum of the minimum switch-on time and the minimum switch-off time and the sum of the device operating time and the minimum switch-off time set for the time period. **Corrective measures:** • When setting the time period, take into consideration the maximum program operating time or the minimum switch-on and switch-off time and the set device operating time.
The Sunny Home Manager does not switch the SMA radio-controlled socket on.	You may have set the SMA radio-controlled socket to "Automatic" at the beginning of a time period, e.g. the time period starts at 1:00 p.m. and you have set the SMA radio-controlled socket to "Automatic" after 1:00 p.m. If, due to the maximum program operating time, the load cannot complete operation or if the load does not have the set device operation time available within the time period, the Sunny Home Manager only switches the SMA radio-controlled socket on within the next time period. **Corrective measures:** • To set the connected load to start immediately, set the operating mode of the SMA radio-controlled socket to "Switch On" (see Section 9.3).
You cannot configure the SMA radio-controlled sockets in the Sunny Portal and cannot set the operating mode of the SMA radio-controlled sockets using the Sunny Portal.	You do not have "Installer" or "Plant Administrator" user rights. **Corrective measures:** • Ask the plant administrator to assign you "Installer" or "Plant Administrator" user rights (see Section 13.4 "Changing User Rights", page 88).

Problem	Cause and corrective measures
Message in the system logbook: "Fed-in power has repeatedly exceeded the permitted value"	The function "Limiting of the Active Power Feed-in" is activated, but more than the maximum permitted active power has been fed into the power distribution grid. **Corrective measures:** • Make sure that the feed-in meter used complies with requirements (see installation manual of the Sunny Home Manager). • Make sure that the feed-in meter is configured correctly (see Section 8.6 "Configuring the Energy Meter", page 44). • Make sure that the *Bluetooth* connection between all the devices in the plant is good. You can check the connection quality with Sunny Explorer (see Sunny Explorer user manual). If necessary, use the SMA radio-controlled socket as a repeater. • Make sure that the parameter "Operating Mode Active Power" is set to the value **Active Power Limitation P via Plant Control** for all inverters.
Message in system logbook: "Active power limitation is deactivated due to a configuration error"	The function "Limiting of the Active Power Feed-in" was deactivated by Sunny Home Manager because the plant configuration in the Sunny Portal was faulty. **Corrective measures:** • The message can appear while making changes to the Sunny Home Manager plant, e.g. upon device replacement. In this case, no action is needed. • If the message appears over an extended time period, contact the SMA Service Line.
Message in the system logbook: "Disturbance: Active power limitation is activated without taking the self-consumption into account."	The function "Limiting of the Active Power Feed-in" is faulty because there is no data from the feed-in meter. There is a risk of yield losses, because the self-consumption of the household cannot be taken into account. **Corrective measures:** • Make sure that the feed-in meter is working and correctly connected.
Message in the system logbook: "Feed-in meter my be faulty. Active power limitation deactivated."	The function "Limiting of the Active Power Feed-in" was deactivated because the S0 feed-in meter has not supplied any data in 24 hours. **Corrective measures:** • Make sure that the feed-in meter is working and correctly connected.

Problem	Cause and corrective measures
Message in the system logbook: "Inverter is not responding to active power limitation."	At least one inverter is not responding to the prompt to limit the active power feed-in. In this case, the Sunny Home Manager initiates stronger active power limitation in the remaining inverters. The maximum permitted active power feed-in was therefore complied with. An error has occurred if the message "Fed-in power has repeatedly exceeded the permitted value" appears on the same day. **Corrective measures:** • Make sure that the parameter "Operating Mode Active Power" is set to the value **Active Power Limitation P via Plant Control** for all inverters. • Make sure that the *Bluetooth* connection between all the devices in the plant is good. You can check the connection quality with Sunny Explorer (see Sunny Explorer user manual). If necessary, use the SMA radio-controlled socket as a repeater.

Problem	Cause and Corrective Measures
Message in the system logbook: "Miele@home Gateway was not found."	The Miele@home Gateway is not connected with the network. **Corrective measures:** • Check whether all network cable plugs are inserted and locked.
	The voltage supply of the Miele@home Gateway is faulty. **Corrective measures:** • Check whether the power plug of the Miele@home Gateway is plugged into the socket-outlet.
	The Sunny Home Manager and the Miele@home Gateway are in different networks. **Corrective measures:** • Connect the Miele@home Gateway and the Sunny Home Manager to the same switch/router.
	The Sunny Home Manager and the Miele@home Gateway are configured for different IP- subnets. **Corrective measures:** • If the router supports DHCP, configure the Sunny Home Manager (default setting) and the Miele@home Gateway to DHCP (see manual of the Miele@home Gateway). • If the router does not support DHCP, manually assign IP addresses in the same subnet for the the Sunny Home Manager and the Miele@home Gateway.
	The Miele@home Gateway could not be found by the Sunny Home Manager. **Corrective measures:** • Restart the Miele@home Gateway (see manual of the Miele@home Gateway).

Problem	Cause and Corrective Measures
Message in the system logbook: "Miele@home Gateway could not be retrieved."	The interface to the Miele@home Gateway is faulty. **Corrective measures:** • Restart the Miele@home Gateway (see manual of the Miele@home Gateway).
	The supported firmware version is not installed on the Miele@home Gateway (see Section 9.5.2 "Activating/ Deactivating Miele@home Support for the Sunny Home Manager", page 60). **Corrective measures:** • Update the Miele@home Gateway to the supported firmware version (see manual of the Miele@home Gateway).
Message in the system logbook: "Error in the processing of Miele@home data"	The interface to the Miele@home Gateway is faulty. **Corrective measures:** • Restart the Miele@home Gateway (see manual of the Miele@home Gateway).
	The supported firmware version is not installed on the Miele@home Gateway (see Section 9.5.2 "Activating/ Deactivating Miele@home Support for the Sunny Home Manager", page 60). **Corrective measures:** • Update the Miele@home Gateway to the supported firmware version (see manual of the Miele@home Gateway).

Problem	Cause and Corrective Measures
Message in the system logbook: "Miele@home data (for devices <id>) incomplete"	The interface to the Miele@home Gateway is faulty. **Corrective measures:** • Restart the Miele@home Gateway (see manual of the Miele@home Gateway).
	The supported firmware version (see Section 9.5.2 "Activating/ Deactivating Miele@home Support for the Sunny Home Manager", page 60) is not on the Miele@home Gateway. **Corrective measures:** • Update the Miele@home Gateway to the supported firmware version (see manual of the Miele@home Gateway).
	Miele devices are outside the range of the PLC to the Miele@home Gateway. **Corrective measures:** • Connect Miele devices in range of the PLC (see manual of the respective Miele device).
	One or more Miele devices are not correctly configured in the Miele@home Gateway or for Smart-Grid. **Corrective measures:** • Configure Miele devices in the Miele@home Gateway (see manual of the Miele@home Gateway). • Configure Miele devices for Smart-Grid (see manual of the respective Miele device).

Problem	Cause and Corrective Measures
Message in the system logbook: "Error in the control of the Miele device <id>."	The interface to the Miele@home Gateway is faulty. **Corrective measures:** • Restart the Miele@home Gateway (see manual of the Miele@home Gateway).
	The supported firmware version is not installed on the Miele@home Gateway (see Section 9.5.2 "Activating/ Deactivating Miele@home Support for the Sunny Home Manager", page 60). **Corrective measures:** • Update the Miele@home Gateway to the supported firmware version (see manual of the Miele@home Gateway).
	Miele devices are outside the range of the PLC to the Miele@home Gateway. **Corrective measures:** • Connect the Miele devices in the range of the PLC (see manual of the respective Miele device).
	One or more Miele devices are not correctly configured in the Miele@home Gateway and configured for Smart-Grid. **Corrective measures:** • Configure Miele devices in the Miele@home Gateway (see manual of the Miele@home Gateway). • Configure Miele devices for Smart-Grid (see manual of the respective Miele device).

Problem	Cause and Corrective Measures
Miele devices are not being controlled as expected and always switch on at the end of the specified time period.	The interface to the Miele@home Gateway is faulty. **Corrective measures:** • Restart the Miele@home Gateway (see manual of the Miele@home Gateway).
	The supported firmware version is not installed on the Miele@home Gateway (see Section 9.5.2 "Activating/ Deactivating Miele@home Support for the Sunny Home Manager", page 60). **Corrective measures:** • Update the Miele@home Gateway to the supported firmware version (see manual of the Miele@home Gateway).
	Miele devices are outside the range of the PLC to the Miele@home Gateway. **Corrective measures:** • Connect the Miele devices in the range of the PLC (see manual of the respective Miele device).
	One or more Miele devices are not correctly configured in the Miele@home Gateway and configured for Smart-Grid. **Corrective measures:** • Configure Miele devices in the Miele@home Gateway (see manual of the Miele@home Gateway). • Configure Miele devices for Smart-Grid (see manual of the respective Miele device).

16 Contact

If you have technical problems concerning our products, contact the SMA Service Line. We require the following information in order to provide you with the necessary assistance:

- Serial number and software package of the Sunny Home Manager
- Serial number and software package of the SMA radio-controlled socket
- Energy meter type
- Reading head type

SMA Solar Technology AG

Sonnenallee 1

34266 Niestetal, Germany

www.SMA.de

SMA Service Line

Inverters	+49 561 9522 1499
Communication:	+49 561 9522 2499
Fax:	+49 561 9522 4699
E-Mail:	ServiceLine@SMA.de

Legal Provisions

The information contained in this document is the property of SMA Solar Technology AG. Publishing its content, either partially or in full, requires the written permission of SMA Solar Technology AG. Any internal company copying of the document for the purposes of evaluating the product or its correct implementation is allowed and does not require permission.

Declaration of Conformity

SMA Solar Technology AG hereby declares that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The entire CE Declaration of Conformity can be found at www.SMA-Solar.com.

Software Licenses

The licenses for the software modules used can be found on the CD provided.

Trademarks

All trademarks are recognized even if these are not marked separately. Missing designations do not mean that a product or brand is not a registered trademark.
The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by SMA Solar Technology AG is under licence.
QR Code® is a registered trademark of DENSO WAVE INCORPORATED.

SMA Solar Technology AG
Sonnenallee 1
34266 Niestetal
Germany
Tel. +49 561 9522-0
Fax +49 561 9522-100
www.SMA.de
E-Mail: info@SMA.de
© 2004 to 2012 SMA Solar Technology AG. All rights reserved

SMA Solar Technology

www.SMA-Solar.com

SMA Solar Technology AG
www.SMA.de

SMA Australia Pty. Ltd.
www.SMA-Australia.com.au

SMA Benelux bvba/sprl
www.SMA-Benelux.com

SMA Beijing Commercial Company Ltd.
www.SMA-China.com.cn

SMA Central & Eastern Europe s.r.o.
www.SMA-Czech.com

SMA France S.A.S.
www.SMA-France.com

SMA Hellas AE
www.SMA-Hellas.com

SMA Ibérica Tecnología Solar, S.L.U.
www.SMA-Iberica.com

SMA Solar India Pvt. Ltd.
www.SMA-India.com

SMA Italia S.r.l.
www.SMA-Italia.com

SMA Japan K.K.
www.SMA-Japan.com

SMA Technology Korea Co., Ltd.
www.SMA-Korea.com

SMA Middle East LLC
www.SMA-Me.com

SMA Portugal - Niestetal Services Unipessoal Lda
www.SMA-Portugal.com

SMA Solar (Thailand) Co., Ltd.
www.SMA-Thailand.com

SMA Solar UK Ltd.
www.SMA-UK.com